

# BOARDWATCH MAGAZINE

Guide to the Internet, World Wide Web and BBS

## Internet People-Finders Locate Anyone, Anywhere

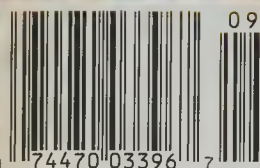
Internet Voice Phone  
Standards Emerge

Canadian ISPs Rewire  
With Wireless

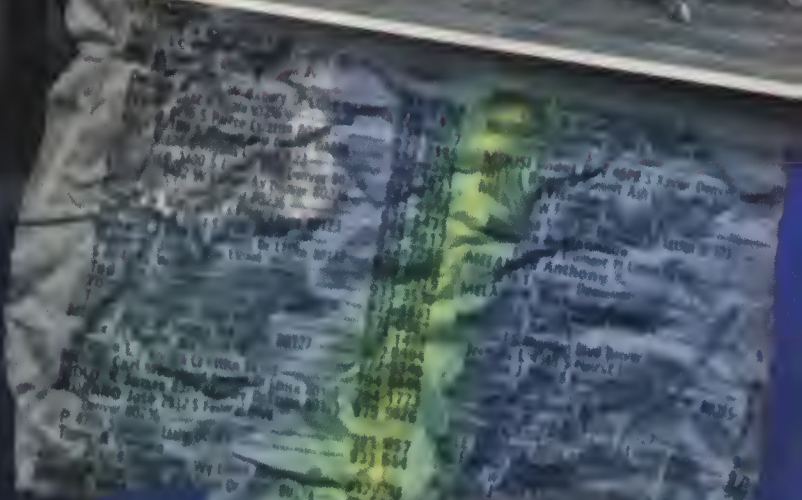
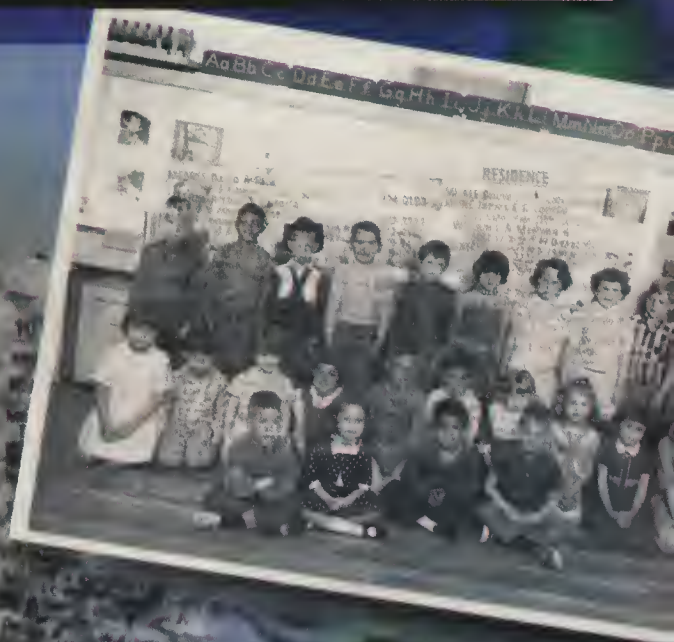
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Are Your Doors Wide  
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the dead horse documentation.

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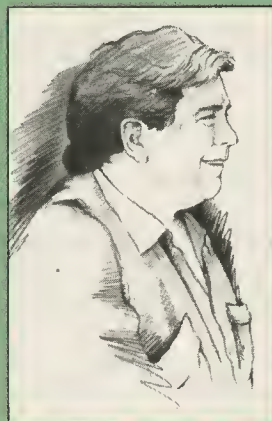
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## FABLE OF CONTENTS

### SEPTEMBER 1996



**Jack Rickard —**  
**EDITOR'S NOTES**  
.....8

**IN MY HUMBLE OPINION**  
Letters to the Editor .....10



**John Dvorak —**  
**DVORAK ONLINE**  
Interactive TV - a Fascist Dream ..... 92



**Chris Babb —**  
**BABB'S BOOKMARKS**  
Internet People Locators. .... 30



**Michael Erwin —**  
**PUBLISHING ON THE WEB**  
Part 21: Web Server Security Checklist ..... 36  
**WEB SERVERS DISSECTED**  
SCO's Internet FastStart Server ..... 40



**Jim Thompson —**  
**TECHNOLOGY FRONT**  
WEB Office -  
Painless Web Page Development Suite ..... 26



**Robert Rankin —**  
**ISP TALK**  
Canadian ISPs Rewire with  
Wireless Satellite Service..... 46



**Jeff Pulver —**  
**THE SOUND OF THE INTERNET**  
Internet Voice Phone  
Standards Emerge..... 102



**David Hakala —**  
**LIST OF THE MONTH**  
Martial Arts Resources ..... 86



**Forrest Stroud —**  
**CONSUMMATE WINSOCK APPS**  
VDOPhone; Gravity Newsreader;  
Wetsock Weather; WebAgent  
& SuperBookmarks ..... 44



**Rea Andrew Redd —**  
**EDUCATION LINK**  
Distance Learning Compels  
New Education Paradigms ..... 66



**Bill Gram-Reefer —**  
**THE DEREGULATION FEEDING FRENZY**  
AT&T's Strongarm Tactics Hinder  
Competition, Betray Customers ..... 72



**Wallace Wang —**  
**NOTES FROM THE UNDERGROUND**  
Alternative News Sources On the Internet ..... 60  
**BIG BOARD BRIEFS**  
America Online Overbiling  
Settlement Meets Resistance ..... 80



**Ric Manning —**  
**MANNING THE WIRES**  
Coming Soon to Your TV -  
the Internet ..... 70

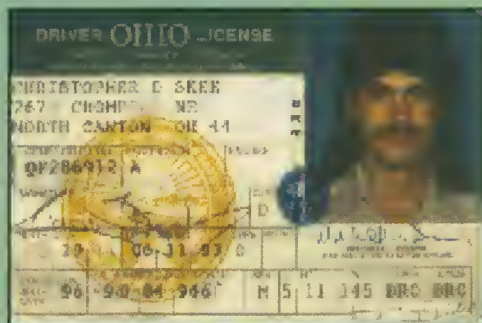


**Durant Imboden —**  
**PUTTING THE NET TO WORK**  
Literary Research Sources  
on the Net ..... 76



**Frank Sowa —**  
**CYBERWORLD MONITOR**  
Backbone Providers Threaten  
Small ISPs' Survival ..... 52





## Internet People-Finders Have Your Number

PAGE 30



## Who Is This Famous Author?

PAGE 76

## FEATURES

### COVER STORY:

Locate Anyone, Anywhere Using Internet People Locators ..... 30

Java Flavor of the Month: Automatic Ad Rotator ..... 56

Kevin & Kell - Spam Master Rodent ..... 38

Book Bytes ..... 84

## TELEBITS..... 50

Website Pro Ships With Encryption, SDK And ODBC

Microsoft NT Crippleware Trial Balloon Shot Down

Wireless T1 Reaches Up To Six Miles

Cisco Acquires Telebit Corp.

Internet Banner Network: Cash For Your Web Space

Real-Time Credit Card Charges For Web Sites

Microsoft Adds More ISPS To Internet Explorer

Stock Photos Fast At Photodisc Site

Preferred Search Engine Listing: Buy Your Way To The Top

Hauppauge's 30 Frames/Second Web Camera Board

Telefinder 5.1 Adds Dynamic Web Pages, Multi-Hosting & More

## LISTS OF THINGS

Martial Arts Resources ..... 86

WebWatch Ads. .... 88

Advertisers List. .... 90



## Martial Arts On the Web

PAGE 86



## The Web TVs Are Coming

PAGE 70

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# EDITOR'S NOTES

## DEVOLUTION AND THE CLINKERNET

The process of publishing *Boardwatch Magazine* is always a learning experience. The process of publishing our new Directory of Internet Service Providers has been even more so.

In our Summer issue of the directory, we did something a little bit different. We had received a lot of phone calls from the first issue revolving around some variant of the question "where is the heart of the Internet." So for the summer issue, we set out on a fool's errand to find it, and map it. We naively assumed that we could identify the major backbone operators, and simply call and request a set of standard information from each, and map the Internet.

The process was a little frustrating. We had to revise our overall mapping vision several times. But we found quite surprising that what we initially thought was secrecy and a profoundly protective lack of courage was actually much simpler. Many of these organizations really didn't know how their backbones worked, where they were, or any of most of the particulars we were seeking.

Oh, certainly there is a core of technical elite at the heart of each of these organizations that well understand the topology of these networks. But the rank and file at the edges and administrative functions of these organizations simply don't. We did the best we could, sent everyone the results on publication, and were gratified to see a very positive response to what we were doing. So positive, we started to get suspicious.

We are accustomed to dealing with Internet Service Providers, BBS operators, forum admins on commercial services, etc. All in all a tough crowd actually. Were the people in these large organizations just easier?

As it turns out not. The truth is, the directory gave them a view of the Internet most of them just didn't have. About half of them called to enter bulk orders for copies. Since we had sent eight or ten copies to each, I had to ask why. It was not so much for marketing purposes actually - but rather internal training. They had hired so many new warm bodies that it was a problem. They might be experts at the function they were hired for, but lacked an overview sense of precisely what the Internet was today.

The ONE ISPCON has also been a learning curve for me personally. I got up close and personal with several mailing lists of ISPs, talked to a number of the movers and shakers among the smaller ISPs, and learned a lot beyond just getting a medium tan from all the e-mail flaming.

There are a couple of trends in Internet Access that emerge and bear some examination:

1. As predicted, customer service and scalability are the only issues that matter in providing Internet access. The big telcos and cable companies are not going to "take over" internet access and drive the little guys out any time soon.
2. An increasing number of smaller and medium sized ISPs are connecting to more than one national backbone provider. In some cases several.
3. There are some serious problems at the national backbone level. Most of these companies are NOT profitable and are gradually losing hope of becoming so. PSInet lost over \$10 million in the most recent quarter. UUNET did finally turn a profit - less than \$2 million for the quarter. Worse, there is some significant fragility at the backbone level. Sprint had a single router go bazooka in July that nearly crippled

the net. There were places you just couldn't get to.

4. Issues such as routing tables and peering agreements not only haven't gone away - they have reached critical proportions. This is a subject fraught with secrecy and dark motives. In fact, it probably can't be untangled. Sprint has started deciding who's on the Internet and who isn't. MCI has as well. And both have become very picky about who they "peer" with at the NAPs. Just connecting to a NAP doesn't get you any useful connections as it turns out. And both Sprint and MCI want to control who they "peer" with to exchange traffic. The concept of a true Internet is actually dying at the backbone level. Picture more of a war over who can quietly steal the Internet for themselves while nobody is looking.
5. Smaller ISPs are starting to form local NAPs. In Tucson, St. Louis, the Bay area, and elsewhere, smaller ISPs are discovering first that some percentage of all the traffic they handle is local to their metropolitan areas. Since they are often connected to DIFFERENT backbone providers, all this local traffic goes out to the backbones, criss-crosses some mindless level of geography, and comes back in to the metro area through the ISP across town. This is comically inefficient in some cases. An e-mail message to another apartment in your complex can pass through six states to transit 300 feet. As a result, smaller ISPs are forming local NAPs to exchange traffic between themselves - effectively shunting metro traffic locally without transiting the backbones at all.
6. There is a serious disparity in the economics of large pipes. A 1.544 Mbps T1 line is typically \$1500 monthly. A 45 Mbps T3 line is \$17000 monthly in the bargain



basement. Since a T3 is theoretically over 30 times faster, this looks like a bargain. In reality, it is easy to exceed the capacity of a T1, but hard to need the capacity of a T3. There is a similar awkward increment in jumping from T3 to the 155 Mbps OC-3 and the even higher 622 Mbps OC-12. So we are seeing a lot of nT1 strategies where four T1 lines (\$6000 monthly) are inverse multiplexed to create a 6 Mbps channel.

This all points to potentially a very different network, and one that would be very hard to depict in a little directory book (unfortunately for me). It could also be a bit of a shocker to the powers that be. Let's just do a little blue skying here.

Let's say you had ten ISPs in a metro area link up with a cheap frame relay local NAP architecture to exchange traffic among themselves and it proved economically advantageous to them to do so. Let's say you had twenty cities where this happened. Let's say that someone had the bright idea to pool a bit of money and run a line between two of those cities. Let's say they all did it. It wouldn't be long before we have formed essentially another national backbone. It would also probably connect some 400,000 dialup customers and perhaps 600 dedicated access business customers. Mostly using cheap variations of nT1.

What we are describing here is a model that should be intuitive. As the density of population on the Internet increases, the interconnections must move down the tree hierarchy. That is how trees grow. For the Internet to continue evolution as the network it inherently was, this must be made so. The interconnections must cease being good old boy peering agreements at a handful of NAPs between enormous backbone companies with ever fatter pipes. And it must move to hundreds and thousands of connections at lower levels in the hierarchy.

This would have a number of good effects. First, the network becomes more stable. If part of it goes down, the smaller granularity limits the damage, makes the healing process more immediate and less visible, and decreases dependency on a single router somewhere in New York. With the coming ability for users to "roam" the Internet, it almost becomes a non-event - even those affected aren't affected.

Second, it moves the power structure significantly toward the grass roots. What Sprint and UUNET and MCI ultimately decide is in their best interest will be most significant mostly to themselves and their customers. If they get left out of this, they will be scrambling to peer with somebody, anybody, anywhere or they and THEIR customers will be the ones "shut out" of the Internet.

Finally, it rather complicates the bandwidth question. If efficiently distributed, it would probably end the problem. I doubt that would happen, but it certainly moves us away from the edge of the bandwidth technology. It also moves the hardware guys who produce routers away from having to produce increasingly brawny and pricey routers at astronomical prices and toward larger volumes of smaller routers. I'm picturing Cisco 7500 capacity for \$10,000 in two to three years. But I'm also picturing them selling 15,000 of them a year.

All of this rather becomes a function of belief systems. Currently, the smaller and medium sized ISPs are feeling very competitive, and not very cooperative. Cooperation is breaking out in spots among the slightly more sophisticated heads in the business. But they have no organizations, no formal structure, and little in the way of organizational geniuses walking in their midst.

Odd bedfellows is certainly a hallmark of this industry. Now enter Intel, Cisco, Ascend, DEC, Bay Networks, et al. They sell routers, hardware, caller aggregation products, etc. They have been selling them to 25 large companies. These companies are pretty good at taking advantage of the competitive nature of hardware. As a result, the vendors have to invest a lot of effort into each sale, they can invest a lot of effort and lose the sale, and in the meantime, the customer is pretty much dictating terms, schedules, prices, etc. in a rather arrogant fashion. How would they feel about 5000 smaller customers instead? Smaller sales, but more of them spread over a lot of smaller guys who in some ways give them less grief and more stable sales figures quarter to quarter. I think there's a possibility that the DEC and Intel types are going to lead the way to organizing the small ISPs to make the Sprint/MCI war largely irrelevant.

DEC has already established an EXCHANGE at Palo Alto for smaller ISPs. CIX announced they were moving their router there on the announcement.

Intel, an odd player it would appear, is actually spinning off a group to organize ISPs the Internet Communication Action Group (<http://www.ICAG.com>) It's in the emerging blue sky stages, but it appears to be happening.



It's now down to the smaller and medium sized ISPs to smarten up. If they start to organize, cooperate, and start doing this lower level interconnection - they are out from under the yoke of the larger backbones, and pretty much preclude the ability of the telcos to take it away from them for many years. If they don't, they get to do whatever Sprint, UUNET and MCI tell them they can do until they are left as fossils on the Internet trail. My view of the natural evolution of the network was that it was a single backbone linking a handful of regionals. This evolved to multiple backbones linking 2800 ISPs. And the next step is to do away with backbones entirely and grossly interconnect some 5000 ISPs at an ever finer level - essentially hundreds of backbones which makes the concept of backbones basically obsolete.

That avoids the imminent collapse of the Internet and penny per pixel pricing both. It also dethrones almost all of the would-be Internet czars and emperors. It also makes for a very messy network.

It's just an idea.

Jack Rickard  
Editor Rotundus







## Letters to the Editor

Boardwatch Magazine  
8500 W Bowles Ave Suite 210  
Littleton Co 80123

# LETTERS TO THE EDITOR

Address correspondence to Letters to the Editor, *Boardwatch Magazine*, 8500 West Bowles Ave., Suite 210, Littleton, CO 80123; by fax to (303)933-2939 or by e-mail to [letters@boardwatch.com](mailto:letters@boardwatch.com)

## Win95

Dear Jack Rickard,

I have recently discovered your magazine. It has given me so much help in getting connected to the Internet and using Win95 that I recently subscribed. I found your article in the Quarterly Directory Spring 1996 on getting Win95 connected to the Internet the best so far.

One question though. I did the "ping" and "tracert" and "winipcfg" at the DOS prompt and found it extremely interesting. But I clicked the full screen button on the tool bar of the DOS prompt window and now I don't know how to get it back to a window. There must be a command to enter at the DOS prompt. Would you be able to tell me how to get it back to a window?

Thanks for your magazine,

Kelly Gerber  
[rideaux@cris.com](mailto:rideaux@cris.com)

Kelly:

*Not precisely a DOS command, but if you press ALT-ENTER you can switch between windowed and full screen display quite easily.*

Jack Rickard



## WWW HOST COUNT

Gentlemen;

I was referred to your publication by a good friend of mine, Lance Ahern, who is president of Alaskanet. I recently subscribed, as did my current employer, Lochridge & Company. Lochridge is a small consulting firm located in Boston. One of our focus areas is data networking. I have been focusing on Internet-related issues for the past few months, and I have found your publications very useful.

I have an important question that I hope you can help clarify. I have been using estimates of the number of currently active www servers/hosts derived from surveys conducted by MIDS and network wizards. I just noticed in the introductory section of your ISP-listing reference book that you estimate only 229,699 hosts that "think they are www".

This is far less than what I obtain from the two sources above (over 1 million).

Without entering into a more detailed discussion of my approaches at this time, can you please provide some commentary regarding your estimation techniques and how they may relate/differ from those used by NW and/or MIDS?

I will gladly share with you more details regarding my work if it is of interest to you.

Sincerely,

Bob Abramson  
[Bob\\_Abramson@lochridge.com](mailto:Bob_Abramson@lochridge.com)  
Senior Consultant  
Lochridge & Company

Bob:

*It is of interest of course.*

*I've found that the most important element of counting things is defining what you count. And one of the things the Internet community has been just superb at is weasle-wording definitions to create huge numbers that are to me largely meaningless.*

*So let's talk about web servers briefly. In my estimation, a web server is a single machine that thinks it is a web server. A very common convention on the Internet is to define web addresses as starting with the prefix WWW. In this respect, our own web server is [www.boardwatch.com](http://www.boardwatch.com) although we have many other machines such as [mail.boardwatch.com](http://mail.boardwatch.com) etc.*

*Mark Lottor has tracked the number of machines on the Internet that use the www prefix. So what we are counting is the number of individual machines with the www prefix. Lottor published counts for July 1995 and January 1996, showing some frankly phenomenal growth in this - from about 17000 to some 75000. At that time, we did some cross checking with people using other methodologies to arrive at similar counts and they seemed to match. We did a future value calculation using one second intervals as the payment interval on these numbers running from July through January until they rendered identical results. We then update this each second on a kind of a software "CLOCK". This allows us to enter any*

*particular date and time, and see how many web servers there are, in theory, for that date and time, including future dates and times.*

*Now it gets a little hairy. What is a web site? If we have a web server that hosts 10 different entities' web pages, with ten different domain name access addresses, is that one web HOST or 10? And further, each of these entities can sport multiple PAGES. So it rather matters what you are counting and for what purposes. And some ISP's host web sites for 20 or more companies, and might split that up among three actual machines and even complicate it further by using round-robin domain server scripts to actually direct you to a DIFFERENT machine to access the SAME web page. So you could also have 10 machines serving ONE web site. None of this is theoretical, it is ALL being DONE now.*

*So we find the number of machines that think their host NAME is WWW to be something we can deal with, indicative of the level of activity, and trackable over time. Lottor should have new numbers out this month, and we can't wait to check/recalibrate our clock. At that point we should have three known linear data points to draw an accurate trend line.*

*Overall, we favor a conservative and empirically demonstrable approach to counting things. But it depends on what you want to count, and why you want to count that. It is much more impressive to claim there are 30 million web pages out there. I find it is a little misleading, but certainly emotionally gratifying as long as you aren't making any cash investments based on it. In other words, don't bet money on everything you hear about the Internet.*

Jack Rickard



## SERVICE RELIABILITY

Mr. Rickard,

Over the weekend I picked up a copy of Boardwatch's Internet Service Providers. I found it very informative re. ISP and read the section about Customer Service very carefully. I have a question which I believe I can only get objectively answered from you or your personnel.



The situation is this: I am connected to AOL, Compuserve, and an unlimited local ISP named Onramp Technologies in the DFW area. I am using a Mac Sys 7.5 LC520 (the educational models) with ample memory. I believe(d) I am properly configured since I can logon all three with relative ease. The problem lies in staying on. I've noticed that often with Onramp and Netscape browsing, it's a connect time of 3 to 5 minutes before the CD light on my modem goes out and I get messages of "can't find . . ." I've talked to On-Ramp and several others about this and have checked out USRobotics Message board to read all the bad news about the 28.8 Mac n' Fax. I can't get anything out of USR; everyone seems convinced USR's modem is the culprit, particularly Onramp. Of late, however, I've begun to notice it doesn't seem to happen on Compuserve or AOL and I've begun to suspect Onramp of dropping the connection. My question is is there any way to find out how stable ISP connections are, let's say, in a geographical area or at a particular time of week or day? As you so well point out, it's a turkey shoot out there for the time being so I don't know if an answer is possible. I can't seem to get a straight answer from Onramp. They obviously want to blame USR, and I do too since the modem came with a 5 yr. guarantee, but since reading your article, I am now a bit more skeptical re. the ISP service reputation. Maybe with your recent ISP database you could print up a scale of 1 to 10 connectivity ratings/ISP . . . as if they would cooperate!

Anyway, your suggestions would be appreciated. My e-mail is a) [eiremen@onramp.com](mailto:eiremen@onramp.com) or b) 103035,1677@compuserve.com

Much obliged,

Richard McNally  
[eiremen@onramp.NET](mailto:eiremen@onramp.NET)

Richard:

*Yes, it is a turkey shoot. That said, there have been some anomalies with USR modems. I would suggest you borrow another modem model and try that for a few days. If the situation improves, it is probably the modem. If it doesn't, it is probably OnRamp. There really isn't a most-common reason for "dropping connections" during busy times on a service. It is remotely possible to have a function that drops a connection if there is not traffic for a certain number of minutes. This is actually more common on the USER end. If you are using different software to access OnRamp than you are CIS or AOL, you might check your end to see if you have an inactivity timeout set.*

*My experience has been that both USR and the ISP will generally do a great bit of finger pointing until you can demonstrate something empirically. If you can borrow another modem for a few days and determine that the problem is in your modem or in their service, you'll do somewhat better.*

*A dropped connection, as in lost carrier detect, actually sounds modem based to me. These*

*can be a bit hairy as what we are really talking about is an incompatibility between two different modem brands. OnRamp may be using Multitech Modems, where CIS may be using U.S. Robotics. USR modems talk quite well to themselves, but there have been indications that their V.34 isn't precisely done the same way as the Rockwell chip set V.34 used by most of the other modem vendors. I suspect it is part of the retrain sequence. This would account for your experiences, but remains a theory until you test another modem with the same services.*

Jack Rickard



## YOUR JUNE '96 EDITORIAL

Jack,

I read Boardwatch every month (and even attended ONE BBSCON in 1994), however this is my first time writing. I was reading your editorial in the June '96 issue, (not very punctual, am I?) and you seemed to be posing a question (besides the advert for ONE ISPCON) of "where is all this going?" You spoke of all the books and magazines that don't seem to be very focused, yet they claim to be the voice of the Internet and what's happening online. Well, I recently finished reading a very interesting book by Nicholas Negroponte called "Being Digital". (He's the guy that started the Media Lab at MIT.) He has some very interesting perspectives on telecommunications in general. He seems to think that everybody is too focused on the technology and that we are doing things backwards. I realize that this description is vague, but the book is only \$12 and is one that, if you haven't already read the book, you should avail yourself of a copy and start reading.

Good luck at ONE ISPCON!

Later,

Bob Bibbings  
[bibbings@coconut.is.net](mailto:bibbings@coconut.is.net)  
Cartersville, Georgia, USA

Bob:

*I did browse through the book and found it interesting. Negroponte is always interesting. In this case, I found the book appropriately priced.*

Jack Rickard



## ARTICLE SUGGESTION: SMALL BUSINESSES JUMPING ON THE WEB

I have been a Boardwatch reader for many years (Since 1991?). I am currently very interested in WEB pages and how the WEB is affecting small businesses. I saw a C/NET show on TV which talked about a company HOT-HOT-HOT which specializes in hot sauces. They were a small company which served a local market in San Diego but went international when they put their web page

up. (you can find them via YAHOO looking under hot sauces if you are interested).

I have been looking for articles which shows the success or lack thereof of small businesses who go international by using the web for advertising. I believe that your readers will find this of interest.

Hope you take my suggestion and publish some articles along this line.

Thanks.

Jim Cook  
[cook@www.georgetown.ky.us](mailto:cook@www.georgetown.ky.us)

Jim:

*It's a good concept, but one we treat with some care. Obviously we are proponents of the World Wide Web, and use a web site very nearly as a weapon ourselves.*

*That said, I'm seeing a disturbing level of hype/hysteria about how all businesses should be on the World Wide Web, and some growing disillusionment from those who are. I have come to view advice to "put your business on the web" as similar to advising someone with a business that they should "advertise" if they want to increase business. The concept covers a lot of ground. While it is true that advertising will increase sales, some ad copy works better than others. Some advertising mediums work better than others. And it all rather depends on the specific nature and marketing strategy of the business.*

*It is true enough that for some specialty products, it is possible to put up a web site and by being early in the game become a bit of a "star" on the Internet to some success. But for most, the results can be quite disappointing. The online community tends to sell air at a pretty huge markup. But many businesses have hard costs for product, slim margins, and you have to move quite a bit of product to cover the costs of a web presence. For some, it isn't happening as advertised.*

*We have never been able to detect significant online sales activity anywhere in the past ten years. Many bulletin boards tried this route quite early on, again, only to minor successes by exception. The commercial online services such as CompuServe and AOL always claimed fantastic success, but our conversations with actual vendors in their malls indicate a less rosy picture - and no raging success stories at all. In short, the purchase of hard goods online has historically been a fascinating concept with little substantive examples of actual sales.*

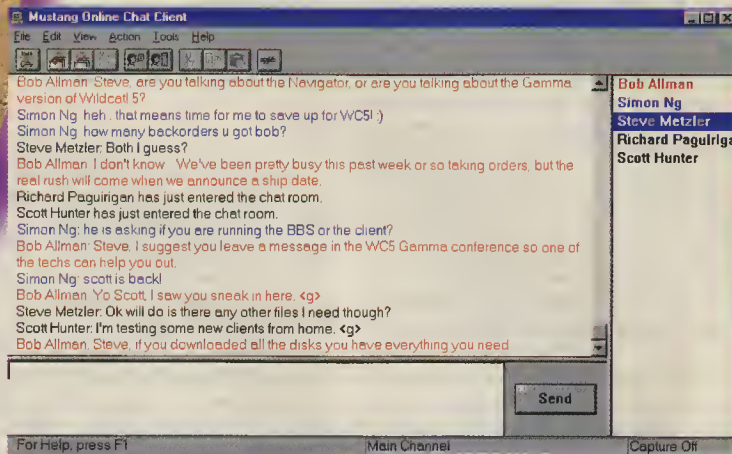
*I myself buy a lot of things online - to the point that I easily become annoyed by companies that insist I call and talk to a humanoid. I like to order things on the web at my convenience and without a lot of chitchat with some thoroughly knowledgeable and entertaining phoneperson. Assuming I am not alone, the concept of businesses selling online should be very viable. But I repeatedly find failure predetermined by the online presentation and*



# This is your Web Server



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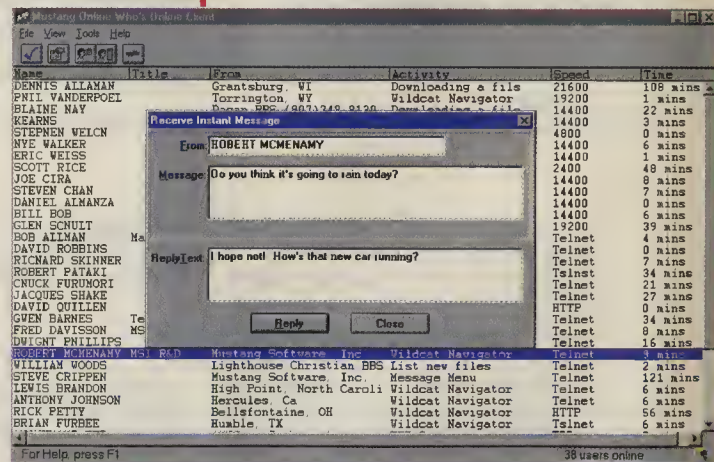
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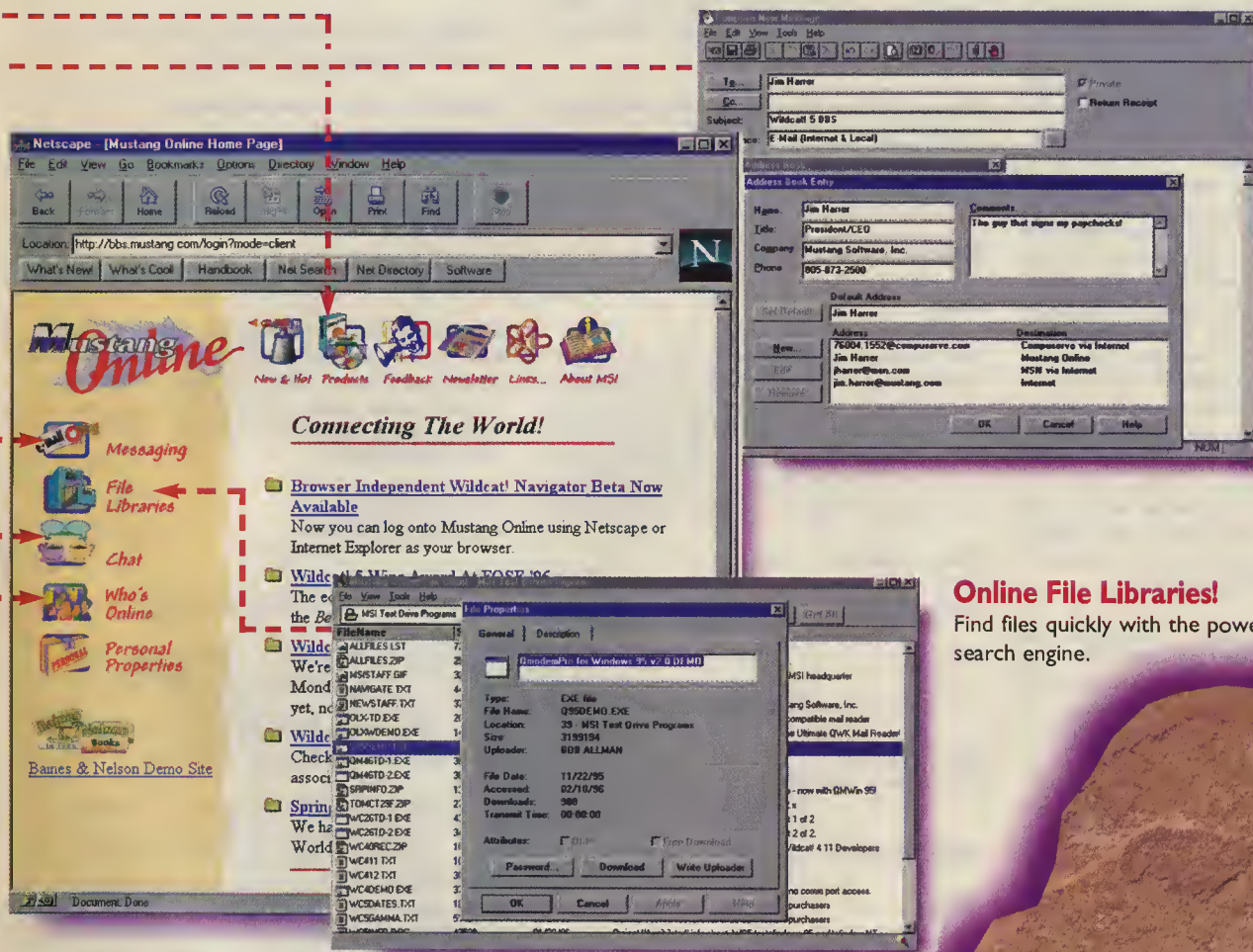


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Shawn P. McCarthy,  
Government Computer News, April 1, 1996



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assumptions of the businesses themselves. A couple of standout problems:

There is a reality disconnect between the expectations of consumers online and the expectations of the merchants. In theory, an online sale removes the cost of the 800 number telephone call, and more importantly the cost of a humanoid to accept and read back your order, your credit card information, your mailing address, the spelling of your name, your phone number, etc. We do the data entry into the system. The computer should be able to spit out the billing, the invoicing, the shipping label, and the packing list quite automatically. As such, the vendor costs should be reduced and we would expect a lower price for a web order, than we could get from the merchant over the 800 number. Not just occasionally, but routinely, we find merchants marking UP product prices on the web. I have ROUTINELY found that the price on the web is higher than the price quoted over the 800 number at the SAME merchant and just as routinely found the price lower for the same goods at local retail stores. What I hear back from the merchants is that they view the online venue as an EXPENSE and that we should pay more for the convenience of ordering online. Predictably, you will find that it IS an expense. They do NOT have the order process automated, and in some cases are copying the order off the system onto a 3X5 pad of paper with a stub pencil and THEN entering the order into another computer somewhere else. It's discouraging.

I could relate tales for days. I recently found two bottles of Silver Oak Cabernet listed at a wine merchant online. As these are actually rather rare at this point and considered something of a trophy among wine collectors, I ordered them. Well actually I THOUGHT I ordered them. Two DAYS later, the merchant called to inform me they had been out of stock for two months. When I asked why they were listed on the service and my order was accepted online, I received a lengthy, detailed, and comically confused account of how the Internet worked, computers worked, and how that wasn't actually even possible. But he offered to fax me a list of what he did have at the moment.

I also ordered a case of Staglin Cabernet by electronic mail from a web site that had no online ordering function, but did have an e-mail address. Three WEEKS later I received a voice phone call from the winery verifying my order. They only check their e-mail once or twice a month and they had "just received" my order. Again, the Sangiovese had been out of stock for months but they could ship the Cabernet.

I was on a fascinating web site about Santa Cruz area wines, but the online ordering function was so hopelessly confused that I simply couldn't complete it and I doubt any humanoid ever could.

My biggest complaint is having things presented online as product offerings when the products are simply unavailable. I've run into this with wine, cigars, and dozens of

other things. You THINK you ordered an item, only to find out days later that not only is it not just about to arrive, but it isn't even available.

So I would predict that about eight or ten months from now, we will be seeing dozens of general press stories about how online consumers just don't buy, and how these companies have been "taken" by the Internet hype. The real underlying story is that there is more to putting a business online than designing a pretty page. We have a long learning curve before we get businesses online in truly useful ways.

But yes, I think it is a fertile area for coverage in future issues of Boardwatch.

Jack Rickard

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#### ANIMATED GIFS...

Mike,

Just wanted to drop you a line to let you know how much I appreciate the Publishing on the Web column. Every one you do seems to parallel what I want to do on my pages. When I was trying to figure out frames, there you were. Now the animated GIFs just when I was trying to figure out how that was done.

Thanks again...

Lynn

lynn.shuler@email.wdn.com

Hi Lynn,

I am glad I was able to help..

Michael Erwin

Boardwatch Magazine

◆ ◆ ◆

#### GREAT STUFF!

Mike,

I've been reading your HTML articles since the first one, and I've learned MORE using them than all the books I have. They actually got me started doing Web pages as a business. Your articles are better organized, explained, laid out and informative than any of the books I have or have seen.

The secret isn't so much a process of filling pages with "howto" information as it is in making it understandable and USABLE for the reader. That is where most authors seem to fall down... making the information easily adaptable for the reader. And that is where yours SHINE MOST! I commend you on a great series.

But one comment about "frames" and all the other "toys" for HTML editing. I find way too many examples of pages that use these tools just because they are available rather than because they enhance a web page. It seems web authors have become so enamored with the "tool technology" they forget what the hell the page is for. In

many cases the pages are to provide information. The information is there, of course, but it is wallowing in the mire of "cute" graphics, graphical techniques, gaudy artwork and poor layout.

Please, if you can, urge those using all these new and wonderful tools NOT to use them just because they are available, but rather, because they have some validity in contributing to a web page's visual beauty and functionality.

Judicious use of anything is a good idea. It applies to designing web pages, too.

Thanks for a fine series of articles.

Ron Erdody

mls@intergate.net

<http://www.intergate.net/uhtml/mls2.html>

Ron,

Thanks for the great comments.. and I tend to agree with you about the "lack" of content and the senseless use of "blink" and the building of "gaudy" pages. Sometimes I think the government should regulate the use of HTML... JUST KIDDING!!

Michael Erwin

Boardwatch Magazine

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#### WHAT WOULD INDY REALLY COST?

Thanks for Indy info in Boardwatch 7/96, maybe I should finally learn to hack Unix, ie Iris. I suppose there are many like me who have tried to learn from Linux, but find wasting too much time on bugs w/o support.

From sdi.com I learn compilers cost another \$1000, one for C and another for C++? and what else? To put it concretely for those you encourage to learn Unix from Indy (who at least have some list of what Linux contains), what would one still have to buy to make Indy as complete as Linux, editors, word processors, and what other such basis, or can these all be compiled and so need only said compilers??

Thanks again.

Herman Euwema

heuwema@worldnet.att.net

Hi Herman,

Instead of using "buggy" Linux, give BSDI a try.. As for the additional cost to the Indy, for a C compiler. gcc is available for the Indy, which is GNU C compiler. It is available at no cost. As for word processors, what do you want? Will xedit do, or do you want Emacs or Microsoft Word? Remember we are talking killer servers here. You may not want to use this type of box for a "Word processor".

Michael Erwin

Boardwatch Magazine

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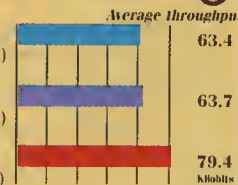
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## ISP CATALOG QUIBBLES

Jack -

Just received my copy of the second edition of the Boardwatch ISP catalog. As a long time reader and admirer (my subscription goes back to the late 80s when you single handedly typed a modest but insiteful newsletter and have attended everyone of your immensely useful ONE BBSCon conferences), I found it quite revealing in, perhaps, unexpected ways.

I enjoyed your INTRODUCTION which set forth the statistics for the whole of the Internet as you perceive them, but, after relating the contents of your catalog to what I know about our local situation, believe your numbers are no closer to the truth than others I've heard - some of which I know are made up.

Let me explain. We are an ISP in small central Illinois community of some quarter million people. In this town we have by my guess about 20 Internet providers with which we compete for business. By our own estimates we are probably 1st in individual accounts and somewhere in the 2nd thru 6th positions in business accounts.

We were not even listed in your list of area code 309 ISPs. This may not be surprising since we haven't made any efforts to seek out recognition of our services outside the Peoria area.

However, you also failed to mention most of the other companies we compete with, including the leader in the business arena which we are fighting feverishly to catch. Additionally, of five you did include, two ISPs have been bought out and are no longer in business.

I know a national undertaking such as you are attempting is fraught with error and you can't be expected to be on top of every Internet backwater eddy, but based on our situation I think the number of Internet users you report on your clock must be significantly underquoted.

If our experience is indicative (and I know we might be an anomaly), you have accounted for only a small portion of the ISPs in the smaller communities of the country and thus only a small portion of the number of end users as well. If there is a parallel miscounting of small providers in the suburbs and urban areas of the large cities your numbers may need to be revised upward in a dramatic fashion.

In any case, I admire your willingness to take a chance and put some numbers before us, although I'm sure this isn't the only letter that you will receive to tell you it's not exactly perfect. However, my findings do tend to bolster your theory about the strength of local ISPs.

Please include our BBS, Future Link, and/or our business ISP company, Solution Services Inc, in your next list.

Best Regards  
Murrel Rhodes

murrel@ssi.net  
Murrel:

*Almost all negative comments we received about the directory were from ISPs who were omitted. We have expended some considerable effort in locating and including all we can find. But there are new ones online each day, and indeed we do miss some. I think as awareness of the directory promulgates throughout the community, we will become more inclusive with each issue. But it is a task we are bound to fail at completing. Our summer issue listed 2266 ISPs, and we have 2800 in the database as I write this. We add approximately 7 per day at this point. Our only hope is to fail in somewhat artful and representative fashion.*

*The "clock" actually wasn't related to ISP data at all, but rather to host counts and a study from Trish associates coded into future value projections that increment each second. I'm hoping to have this "clock" online live quite soon but I'm waiting for Mark Lottor's latest numbers to calibrate. We based the projections on three points in time and if we did our work accurately, we should be able to check our accuracy by comparing the clock predicted number of hosts with Lottor's actual July 1996 numbers. If they match, the clock is probably a pretty good tool. IF they don't we should be able to use the new data to recalibrate and try again.*

*The numbers derived from ISPs were aggregate and based on averages and medians - not actual summary counts. Not all ISPs completed all questions on the form. Obviously, the more participation we gain in this, the more accurate the numbers. But over 2266 ISPs we think we have the most definitive data on this topic available in the industry.*

*In summary, we'll try to do better Murrel. But we're probably not as far off as you think.*

Jack Rickard



## ENSALADA BY DVORAK

Anyone who cooks can't be all bad. But I must quibble a bit over your salads in May B'watch.

I enjoyed Caesar's salad in T-town before WWII and have what we locals think of as the original recipe. NO Worcestershire please. That's in Bob Cobb's salad from the Hollywood Brown Derby. (I've this one if you'd like it.)

For Caesar:

Gently warm fine-chopped clove of garlic in 1/2 cup olive oil Let soak. Boil a cup of water and drop the egg in it to coddle. Tastes better that way than if raw and is original way to do it. While all above is mellowing, two heads of romaine cut or torn as desired. Salt and pepper lightly. Squeeze one (or more for taste) fresh lemon and sprinkle over lettuce. Sprinkle over the olive oil and garlic. Toss with love. Break the coddled egg over same

and toss again. Add croutons or bleu cheese or anchovies in very modest amounts as desired. Very edible with warm french/sour dough bread.

Order of assembly is somewhat important... believe it or not.

Have fun and take care,

Bill Carroll.  
SnDiegoBks@aol.com

Bill:

*A bit of HTML design, a touch of CGI, half-cup of ISP gossip, sprinkle with browser review, and add a debate about the origins of Caesar salad. Presto - a Boardwatch Magazine. I love publishing.*

Jack Rickard



## INET ACCESS MAILING LIST

Jack,

Hi, Jack.

I've been (greatly) enjoying the banter back & forth on the inet-access list....your emails, like your editorials, make a point and are always fun to read.

Anyway, we are one of the 'little guy' ISP's out hear in rural Minnesota, bringing local internet access to 3 small towns....so small that there are more people on a Staten Island ferry boat in rush hour than there are in all 3 of these towns!!!! (I used to live in NY before moving out to the country).

All your stories about getting folk onto the net are true....I hear variations on them all the time....

'Hi, do I need a modem to get onto the Internet?'

'If I have 1 phone line can I talk on the phone and be on the Internet at the same time?'

'My modem is 2400 baud....why does it take so long to load web pages?'

'Ok, I've got my browser working. What do I do next?'

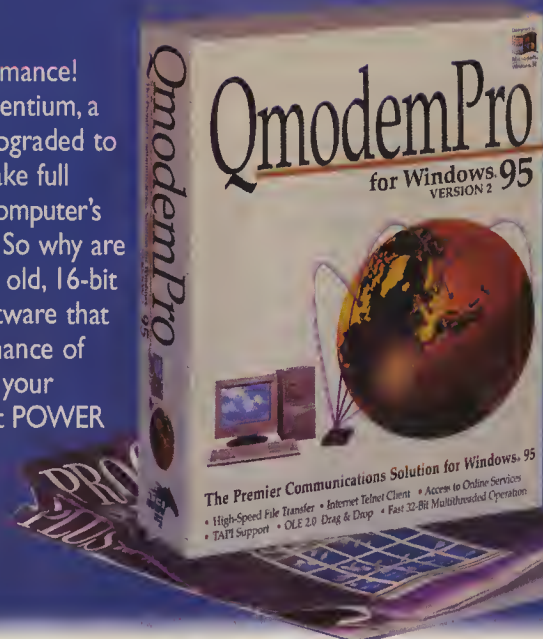
The stories go on & on, but we take a lot of time (on the phone and sometimes on site) with people....just holding their hands and helping them take a few steps into a whole new world. Its a lot of work, but its very gratifying. We must be doing something right, because our users are happy and recommend us to their friends & family....we've added over 100 users in just under 4 months of service....and thing-shave been slow since the summer started. :) Boardwatch, by the way, was instrumental in starting our venture....it was the 1st source of information I found....and one of the only mags I ever make time to read. We started out with Worldgroup and have added a second (Linux) server to handle primary DNS and other features that WG really misses the mark on.



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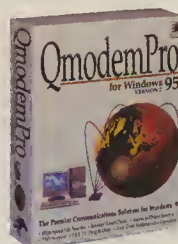
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I just wanted to thank you for the great service you & your magazine perform for the current ISP's and, more importantly, the 'little guys' like myself who are desperately trying to bring the hi-tech world out to the rural areas of this country...areas where this technology isn't just for fun & games....these are places where cheap access to technology is the difference between survival and extinction.

Paul Scivetti  
President,  
Central Minnesota Gateway, Inc.  
sysop@cmgate.com

*Thanks for the note Paul. You guys are my heroes. It is a bit difficult to really picture your role in the world when you are operating out of a tiny office in a strip mall, or from the basement of something, with equipment strung everywhere and nothing on the phone but complaints and weird questions. But the giant telcos aren't going to do this work, and the big software companies aren't going to do this work, and without you, the residents of your rural area can look forward to getting connected in about the year 2525. You are building the net.*

*It "ain't no thang" really to do this kind of thing in St. Louis, WashDC, or the Bay Area. It's easy money. But to string the wire out into the hinterland, help the non-networked become so, is actually a valiant mission in my unqualified, but nonetheless strongly held, opinion.*

*For our readers, Mr. Scivetti is referring to the Internet Access mailing list, inet-access@earth.com. Internet Service Providers and prospective Internet Service Providers can join this list by sending e-mail to inet-access-request@earth.com with SUBSCRIBE in the body of the message. Be prepared for a fairly dramatic influx of about a hundred to a hundred and fifty messages per day though. Very technical discussions of issues in providing Internet access.*

Jack Rickard

## THE MARLBORO MAN

Jim Thompson's last couple of columns have been mostly about vapor and straw men.

I've been a Mustang Software product user since early 1987, and by and large have been pretty satisfied with their products. But Jim's column about Mustang's Wildcat! 5 really shifted my views of his credibility. His unabashed praise and enthusiasm seems to have been generated more by a quick read of the press kit for WC5, and by a few statements from Jim Harrer about products that don't exist than from anything approaching experience with the product.

Just about anyone familiar with the initial version of WC5 is aware that the release item

was unstable, buggy in the extreme and nearly unusable. The complaints to kudos ratio in their own BBS's WC5 messageconference is still around 125:1.

Mustang frankly bit off more than it was able to chew, released too early under pressure from stockholders and anxious sysops alike, and will probably need until well into next year to have the product where it wants it.

While you're able to telnet into and out of the system, most of the promised internet connectivity is either missing or decidedly substandard. SMTP and NNTP were unavailable — unpardonable for a system supposedly designed for live connection to the net — and only a very shaky UUCP came with the package. Most of the package had never been tested under load (Mustang's own board has only a few files and under 100 message areas), and when sysops of larger systems began to use some of the capacity of WC5, performance took a serious and unacceptable hit.

There's a LOT more, of course, but my purpose isn't to badmouth a product that I'm sure Mustang will have honed drastically by year-end. What I do object to is Thompson's flight of fluff about the product — it's a disservice both to potential customers and to Mustang to suggest that WC5 is the ultimate solution for the melding of Internet and BBS technologies when he obviously didn't work with the product past installing it and poking around to see what the screens looked like.

The June 1996 column is a rambling grump about the Internet that lacks both style and content, and offers no fresh insight into anything other than Jim's personal frustration levels.

He's got a DOS-based TBBS system festooned with some aftermarket RIP-based add-ons, and just as he's gotten things where he likes them, he finds that the online community has moved on and is more interested in something else.

Like many of us, he's suddenly found that his hard-acquired and now comfortable knowledge base about communications is outdated, and now he's dealing with a very steep learning curve all over again. What's even more galling to him is that there people out there who have already conquered that curve, and he accuses those "geeks of the world" of deliberately finding ways to confuse outsiders (him).

This column illuminates little else than the fact that Jim not only "doesn't get it" but hasn't yet gotten over it. If handled with humor, this could have been a hilarious piece. If handled with style and insight, we would have all recognized something of ourselves caught in the whiplash of a major techno-zig.

Instead, we got a scratchy bitch session that lacked beginning, middle, end and, most of all, a point.

David Spellman  
david.spellman@ens1.photopro.com

David:

*I rather liked both columns. I do know that Jim Thompson is quite independent of Mustang Software, received no great assistance from them in doing the article. I sent him the program myself and asked him to look at it. He did. The column was what he found. WC5 is a relatively new release, and I would not find it shocking for it to have some problems. I guess I've been looking at new software too long at this point.*

*We got quite a positive response to Jim's rant in the June issue. He raised some valid points.*

Jack Rickard

## MIT.COM - FYI!!!

YAHOOOO!!! Folks - The weight of public opinion and the strong support of all concerned, plus all those who wrote to TLO voicing their opinion(s) has inspired M.I.T. to reconsider and withdraw their objection!! The Disabilities and Handicapped BBS REMAINS operative without perturbation to it's long-held mit.com domain!!

That, (AND a healthy Home Page <G>) PLUS the GREAT response from Jack Rickard at BOARDWATCH Magazine (May his tribe increase!), Kathy Kleiman of Fletcher, Heald and Hildreth, of Arlington, VA, Julie Nichols and the folks at NSI and INTERNIC, and countless others have made it happen!!

The support and caring shown by ALL of you, has shown, once again, that reason CAN prevail in the convoluted, and sometimes harsh world of Legalities. ;-)

My (our) SINCERE thanks to Julie Nichols at NSI and to Lita Nelsen and the folks at TLO for listening to our pleas and responding as they have now done.. All that remains is to verify the terms of the letter agreement and to make it so! :-)

God Bless you ALL!!

Tom McKeever, and the folks at SPACE-CON/BraveHeart BBS and mit.com!!  
tom.mckeever@mit.com

From: Lita Nelsen[SMTP:lita@MIT.EDU]  
Sent: Tuesday, July 23, 1996 10:21 AM  
To: tmckeever@ids.net  
Cc: hersey@MIT.EDU  
Subject: mit.com

Dear Mr. McKeever:

My name, as you will see above, is Lita Nelsen. I am director of the MIT Technology Licensing Office, which handles the MIT trademarks



and other intellectual property of MIT.

I have only very recently become aware of your/our problem with "mit.com", with the departure of Jean Weidemier, formerly the trademark counsel for our office. Jean is on vacation now, prior to her starting of her new job, so I have not been able to contact her to get details of the dispute. So please forgive me if some of the following lacks precision or suitable acknowledgement of prior conversations with our office. I am contacting you now, rather than awaiting Jean's return, because it appears that the issue is heating up and may reach "critical" before she gets back to town.

This is to inform you that MIT intends to withdraw its objection to your use of the domain name "mit.com", and to grant you this use under a "concurrent use" agreement. We will ask in return that you agree to the following:

1. You will not transfer this right to any third party, but confine it to use in your own business.

2. You will agree to forward to MIT all communications that appear to be intended for us. This forwarding would be either through a "hot link" on your page (which we would prefer), or if this is not acceptable to you, through email forwarding.

If these terms are acceptable, please let me know and we will send a simple letter agreement. (Unfortunately, I do not have your mailing address. Please send this also.)

I hope this will resolve the "David and Goliath" dispute, which many of us regret has proceeded this far. It is, of course, very important for us to protect the MIT name—including potential commercial uses. However, it is not our desire to be needlessly rigid in these efforts, and we look to make reasonable compromises.

Thank you.  
Sincerely yours,

Lita Nelsen  
Director

Mr. McKeever:

*Very pleased your particular domain name issue was worked out to everyone's satisfaction.*

Jack Rickard

◆ ◆ ◆

**KUDOS, REMEMBRANCES,  
AND A PUBLISHING ERROR**

Dear Jack:

Just thought I'd start out this message with a thanks for producing such a great rag. After reading (selectively) several different issues since 1993, I have to say that Boardwatch is

simply unmatched in the online magazine business. I'd also like to say thanks to Michael Erwin for his n-part HTML articles. They've been a great help!

Just one condolence—I miss Lance Rose's excellent Legally Online article! What happened to him?

I also picked up the latest issue (July 1996) today. Thanks for yet another lovely picture of BillGatus! Although, I found an interesting "misfeature" in my copy: page 93 (what was supposed to be the JavaScript of the month) is a copy of the June issue's page 38! Was this a mass problem or am I just lucky? <g>

Thanks (one more time) and keep up the good work!

Ryan Sullivan  
rsullivan@why.net

Ryan:

*Lance left to edit a legal journal newsletter. I have heard rumors about the office that he may be back in Boardwatch soon.*

*Mike Erwin is doing a great job. His sense of timing is superb. About the time I need to know something in the HTML techniques area, I can usually find it in the current issue of Boardwatch.*

*By popular request, BillGatus is now available in poster and T-shirt form.*

*Yes, we boggled the JavaScript column rather badly. The Bozo Filter was printed in the August issue, and we're hoping to avoid such publishing faux pas in the future.*

Jack Rickard

◆ ◆ ◆

## NEED ISP CUSTOMER STARTER PACK

Dear Sir;

As a regular reader of your columns, I have noticed times when you give pointers to resources for you readers. I am looking to license a software package which will enable a new subscriber to set up a basic Winsock connection on their computer. For example, most of the larger ISP's provide a disk or disk with some combination of Trumpet Winsock, some shareware Winsock utilities, perhaps a shareware browser along with a setup utility to facilitate installation. An example that comes to mind is the Embarque package. This is not a bad package, but is a little too expensive for an ISP startup.

Do any of your advertisers offer a similar package or do you know of any other third party developers which offer same?

Many thanks and I hope to see you in SF next month.

Chuck Dines  
cdines@west.net

Chuck:

*Let's publish your letter and see what kind of response it draws. My experience is that the one size fits all software packages have been somewhat limiting, though they do help new users get online. I think most ISPs do cobble something or other together. I understand the Trumpet Winsock guys have been getting more aggressive in pursuing those who include their WINSOCK.DLL with such packages without compensating Trumpet. The program is free to end users, but must be licensed if included in such packages and apparently a number of companies have been rather free in including it without doing so.*

Jack Rickard

◆ ◆ ◆

## BROWSER WARS

Jack,

In seeing the cover of this month's BoardWatch (July '96) my initial reaction was, oh no, not another article on the Netscape vs. Microsoft web browser wars.

Over the last two months every damn Internet magazine has done an article about this so called 'war' of the browsers. Primarily they were boring and trite and basically my reaction was 'these are supposed to be writers, intellectually well endowed thinkers and envisionaires.'

They might as well all stand in line and take a number on who does the article next and which words would be moved around so the readers wouldn't get too confused as to which magazine they read the article in.

Well as usual I found the BoardWatch article to be 'excellent', well informed, yet easy to understand.

Another confirmation as to why there really is only one computer magazine I actually subscribe to, BoardWatch.

Yes, I did have one gripe. You provide all of that great insight yet did not compile it into an easy to read final note, e.g. something I could cut out of my magazine and put on my bulletin board as a reference list to which web browsers support which features (yes I'm a web developer). Of course it would probably be dated in a number of weeks, but hey, there's always next months BoardWatch.

Sincerely,  
Brett Tabin  
Travelers OnLine  
<http://www.travelersonline.com/webmaster@travelersonline.com>



Brett:

*We are trying to differentiate ourselves from about 50 Internet magazines out there. Some days are better than others. It can be discouraging. I've heard nearly everything.*

*Recently, I've been hearing a lot from those who would characterize us as a retread from the BBS community. This assumes a great deal - mostly that the BBS community and the Internet community were entirely disparate and different communities. Having known many of the main players in both, this always leaves me a little disoriented. In many many cases they are both the same guy.*

*In some ways, I feel a little wounded we haven't received proper credit for our earlier work. We started coverage of the Internet in April 1989 - about three years before there was an Internet World or any of these others and about eight months after a useful domain name system was deployed. I was looking through the back issues the other day, and noted with some pride that Mosaic for Windows was released November 30, 1993. It was a cover story with several pages of screen captures in our January 1994 issue, and in reading the article over again, I was struck by how much on the mark we were in the initial coverage of this program that really changed the Internet so dramatically. More, I talked with our production manager for some time trying to figure out how we did it at all. If the program was released November 30, how did we get the story in the magazine in our January 1994 issue? There were 31 days between when we could have first seen the program and when we were ON the newsstand.*

*The Internet has been a cover story more or less continuously since January 1990. We don't think we've changed at all. In fact, we view ourselves as more or less a constant IN a world of change.*

*But perception is reality. We can do the best work we can. After that, we have to trust the readership to know the difference. I'm pleased you do.*

Jack Rickard

◆ ◆ ◆

#### BOARDWATCH ONLINE

'Hello Jack,

I read with interest your reply to Marv Miller in the March 1996 issue concerning your putting Boardwatch online.

This is also a great boon to those that don't live in the USA that can't rely on always getting Boardwatch. Even ignoring the few copies that seem to appear at the local news agents, the cost is fairly prohibitive, thanks to the poor Rand/Dollar exchange rate.

So I thought I'd thank you for allowing those outside the US to also get access to your excellent magazine.

Cheerz,

Andre

yttech#onwe.co.za or  
swan@pop.onwe.co.za  
<http://www.onwe.co.za/>  
<http://www.gautengmail.co.za/yttech> }

Andre:

*Pleased we're making the trip to the dark continent in good fashion. We rather think that if we talk the talk, it is incumbent that we also perambulate the perambulate.*

Jack Rickard

◆ ◆ ◆

Jack,

As always, your July issue is a thought-provoking and interesting publication. I would like to raise an issue that Frank X. Sowa touched on in his recent Cyberworld Monitor column.

The issues with online and electronic copyright are real and must be dealt with, but we must do this overhaul very carefully!

The point I want to magnify, though, is that "Government agents feel that the taxpaying public needs to get some return on this investment." Frank is referring to the possible charging of access fees for what we now consider "public access" and therefore free information.

I have a serious disagreement with "government agents" who wish to make the public pay TWICE for such information. The monies the "government" spend on the research is largely generated by taxing the public, therefore the term "public access" has come to mean free access because each person pays his/her share. Since when did the government become a for-profit venture? The other hand, I'm not against paying a modest maintenance fee to maintain access to the information if it is deemed useful.

Could this be a move to shift money from one source to other unrelated projects, fund industries that refuse to change, or line more politicians' pockets? I much rather prefer a government that understands the same thing a family understands - you have to cut back spending or go without when things get tough. Why does "government" insist on continual growth? That's unnatural, but that's another discussion.

Anyway, I am concerned that the issues of copyright may infringe negatively upon the status quo as it applies to the electronic information industries, and I don't wish to risk my livelihood and my family's well-being if I miss a piece of mail as it passes through my

BBS systems. I don't knowingly let users "publish" copyrighted works on my systems, but there is no way a person can read everything traveling over these systems!

Maybe the originator of the "copy" command should be sued for giving everyone the freedom of copying that we have all enjoyed since some computer OS designer developed and sold a license to an unrestricted "copy" command. Yeah, maybe we can all sue Microsoft because it's THEIR copy command! We don't OWN the software, THEY do! Lately that seems to be the American Way! <GRIN>

I know you'll keep us informed. Personally I'm glad you're there! Let me know what I can do to protect our rights. And thanks for the wonderful mag, of course.

Gordon Cunningham  
gordon@tpr.com

Gordon:

*It's a problem. I'm personally both fascinated and disappointed in government information online. I am a bit of a map geek and I have followed the work of USGS and EROS and JPL for several years. They are doing some absolutely fascinating work in mapping the surface of the U.S. and indeed the planet. The Earth Resources Observation System (EROS) Data Center, includes satellite Advanced Very-High Resolution Radiometer (AVHRR) useful for tracking vegetation growth on a regional basis. The EROS Data Center also serves as the central ordering agency within the Federal Government for Land Satellite (LANDSAT) Thematic Mapper (TM) and Multispectral Scanner (MSS) digital data. But they post a few teaser images online that are really quite impressive, but access to actual data is becoming increasingly expensive and the procedures to obtain it are not only not improving, but seem to be intentionally shrouded in increasingly obscure beauracracy.*

*Have a peek at the following sites:*

<http://www.jpl.nasa.gov/>  
<http://edcwww.cr.usgs.gov/>  
<http://eos.nasa.gov/>

*As to copyright law, the current one is misunderstood and the public knowledge of it is consistently flawed. I get requests from people to "allow" them to put a URL to our site on theirs and there are actually people out there insisting that it is a copyright violation to point to another web site without their permission. The body of public knowledge regarding existing copyright law is nearly comical. And I'm skeptical changing the law and further complicating it will be helpful.*

Jack Rickard

◆ ◆ ◆



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## FAREWELL, MAC COLUMN!

Dear favorite Editor Rotundus!

As a long-time Mac owner (1985 to now), you're evaluation of my interest in BoardWatch Magazine (as noted in the Letters to the Editor, July Issue) is precisely correct. I never read your fine publication for its Mac content! I am certain that many others are like me ... with interest specifically in the online world content (web and bbs software) - and picking up cross platform issues of concern and interest which affect us all! I'd get to the Mac Column late in the reading - although I always enjoyed it and thanks for your longterm attention to my platform preference!

I hope that you will let us know, from time to time, if you see a major cross-platform technical glitch coming down the pike for us to address on the internet media!! But, as things are developing today, it appears that everyone is moving to standards which make this issue near to invisible.

I will miss your ONE ISPCon this year — first time since Atlanta! I'm so disappointed that cash flow this year is tight, SF far from Boston and expensive! :\ However, hope you will be in St. Louis in October for the AOP Summit '96 gathering!

Thought you'd like to know that we've put in a hot link in the BBS Corner on MCM/AOL to your Boardwatch website! That corner of AOL IS cross-platform with links to both PC and Mac platforms! :)

Your admirer and follower!!!

Karen E. Oleson  
(AFC Karen/MCM Forum/AOL and  
AOP Member)  
[KareOleson@aol.com](mailto:KareOleson@aol.com)

Karen:

*I rather gather most of the Mac aficionados that read Boardwatch hardly read it for the Mac content. We'll cover developments related online as well as possible, but I'm seeing decreasing levels of platform issues - probably one of the great gains of online connectivity.*

*Sorry you won't be joining us in San Francisco. I visit St. Louis occasionally as I used to live there. But we won't be making the AOP Summit 96 gathering. After a very promising start, the AOP seems to have embarked on a mission of irrelevancy as profoundly misdirected as any I've seen in the past. The online community still needs some form of useful association, but I fear the AOP has stumbled badly and pretty much eliminated itself as a viable contender. We're hoping to see something viable out of the ISPCON gathering. Hope springs eternal.*

Jack Rickard



## SOUTH DAKOTA ISP

I read the letter from Pat@sodak.net about ISP's in South Dakota. If you want a complete list of ISP's in our state check out

[http://www.dsu.edu/sodapop/biz/  
internet/providers/](http://www.dsu.edu/sodapop/biz/internet/providers/)

The list is up to 19 and growing. I'm sure these businesses would make a great addition to your ISP Directory.

BTW- Great magazine! Thanks for all your insight throughout the years.

Sincerely,

Patrick Groce  
[patg@is.state.sd.us](mailto:patg@is.state.sd.us)

Patrick:

*Thanks for the pointer. We'll follow up and make sure they are included in our directory.*

Jack Rickard



**mit.edu vs mit.com**

Hi Mr. Rickard:

In reading about this controversy in the July '96 Boardwatch Letters, it occurs to me that the requirements (posting of bond and/or suspension of domain name) to maintain a domain name during a dispute could be considered in violation of the due process clause.

Has anyone (ACLU ?, EFF ?) considered using this dispute as a test case?

Yours,

Bob Meizlik  
[72074.3272@compuserve.com](mailto:72074.3272@compuserve.com)

P.S. I ran low on magazine reading time, and had a choice: PC Mag or Boardwatch. You won.

Bob:

*Due process is a term referring to the procedures used by government in largely criminal matters. The InternNIC is not operated by the government and I would not think would be subject to due process restrictions.*

*Winning is good. Thanks for reading.*

Jack Rickard



## BOARDWATCH

Dear Jack;

In my area we do not have a local distributor for Boardwatch magazine, so I decide to sub-

scribe to it. The international subscription is costly, but the contents of the magazine worth more, this is my second year. I would love to thank you and tell you to keep up the great work.

Sincerely yours  
Khalid Almansour  
Saudi Arabia  
E-Mail :- [Mansouka@Sahara.Com](mailto:Mansouka@Sahara.Com)

*I am sympathetic to the cost issue of International subscriptions. We have found that our overseas subscribers do not like to receive Boardwatch months in arrears, and so the only option we offer is airmail delivery. I often look in the subscriber database in amazement at the number of people overseas who subscribe to this small magazine, and at such a delivery cost.*

*In any event, we are very pleased to count you among our readers.*

Jack Rickard



## SEARCH ENGINES:

Hey Jack,

Is it me, or does it now actually take OVER 2 MONTHS to get a URL listed on YAHOO or WEBCRAWLER?! What's going on here?

Regards,  
Richard J. Tafilaw  
[Richard@HYJACKS.COM](mailto:Richard@HYJACKS.COM)  
aka [Boss@KTB.NET](mailto:Boss@KTB.NET)  
aka [av673@lafn.org](mailto:av673@lafn.org)

Richard:

*Oh, it's probably you. But yes, the search engines are a bit unpredictable. They don't really know if they want to list you for free, or get you to pay for an ad. They need to find a revenue source, which is difficult when offering a free service. And the list of "hits" from these search engines has grown to the point they are larger than the body of pages when many of them started. I love them. And I hate them. I think we really are going to see software that serves as a search engine for the search engines. It's happening now and I look for it to break out with some killer stuff early next year.*

Jack Rickard ◆





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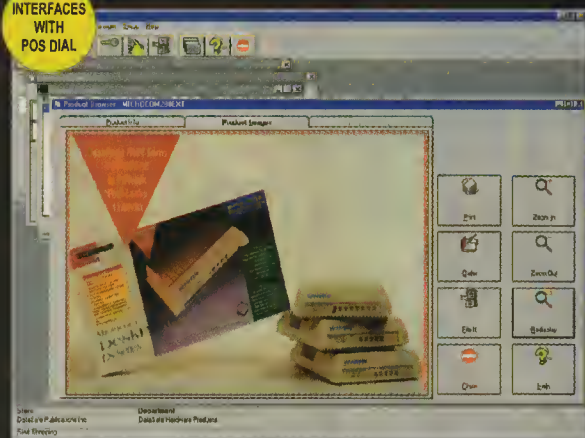
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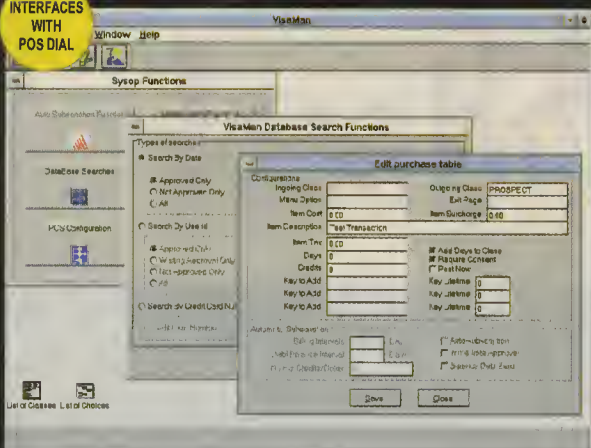
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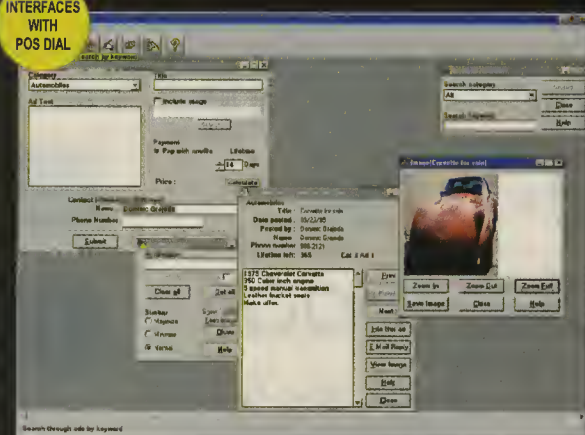
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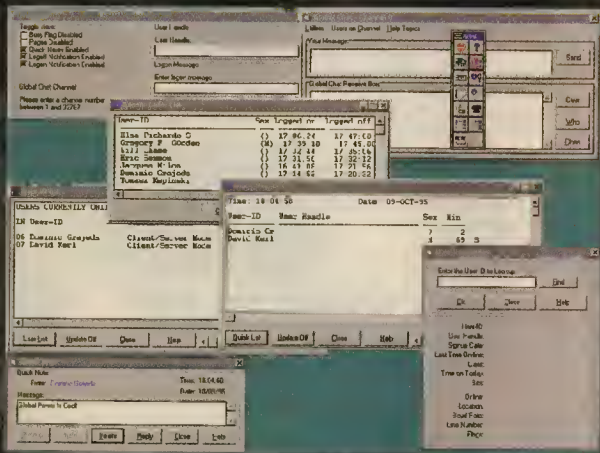


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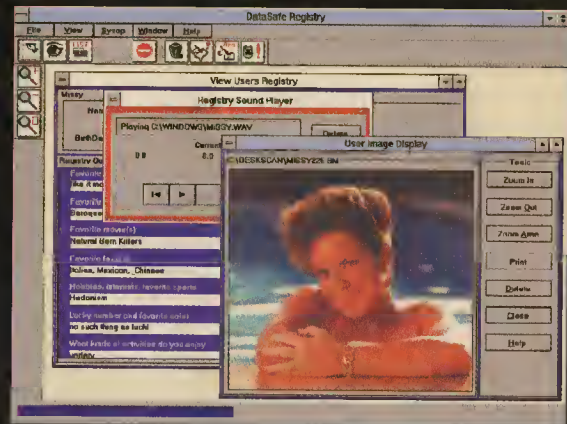
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Western News Service

## WEB OFFICE — ALL THE TOOLS NEEDED TO BUILD A WEB SITE

**W**EB Office, a suite of 32-bit authoring and publishing tools and utilities from Blue Sky Software Corporation, provides almost everything needed to setup and maintain Intranet/Internet Web sites.

Included in the package are five basic utilities — a Help-to-HTML converter, HTML tool kit, Web Doctor, Hotspot Studio and Internet Assistant for Microsoft Word for Windows (HTML authoring tool). All of these are accessible via an integrated tool bar for instant access.

"WEB Office addresses the needs of both novice and professional users with a complete Web Authoring Solution. It allows users to easily create Intranet/Internet Web sites from scratch, leverage existing work, and efficiently maintain their Web sites," said Jorgen Lien, CEO of Blue Sky Software.

### HTML AUTHORING TOOL

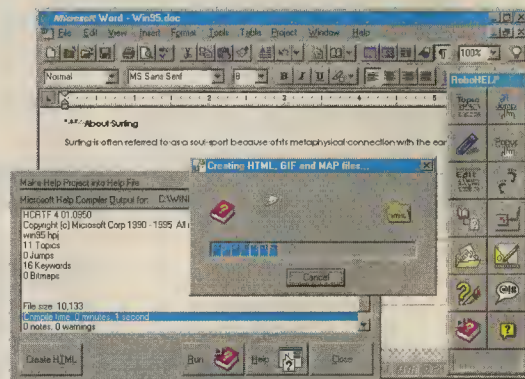
At the heart of the suite of tools is *Internet Assistant for Microsoft Word for Windows*, the same freeware HTML authoring tool available from Microsoft Corporation. But Blue Sky has enhanced the program, by providing complete documentation including a nice tutorial, a starter application and access to their technical support staff. The documentation is a welcome addition. It is clear, concise and easy to follow. The tutorial will have you creating HTML pages in no time. You will also find answers to frequently asked questions. For the novice, the docs that accompany Web Master discuss the planning and designing of Intranet/Internet Web sites and guide you through the creation of a Web site. Advanced tips will save the experienced Web author both time and effort. I found a number of tips that had taken me months of trial and error to discover on my own.

Be advised that all of the programs in the WEB Office suite are 32-bit applications. You must be running Windows95 or Windows NT in order to use any of them. Internet Assistant works only in conjunction with Microsoft Word 7.x for Windows 95. I tried to install the program while running a copy of Word 6 and was quickly informed that Word 7 was required.

Internet Assistant makes creating and editing HTML documents as easy as creating a normal text document. Basically, if you know how to use Microsoft Word 7, you already know most of what you need to create your Web documents. Among the main features are a WYSIWG environment which allows you

to see your work and make adjustments before making it available online.

One of the nicest features is the ability to convert any document that can be opened in Microsoft Word to an HTML document. This includes text files, Word documents (DOS, Windows and Macintosh files) and Word Perfect documents as well as Microsoft Excel spreadsheets, Lotus 1-2-3 spreadsheets, Microsoft Works for Windows, Wordstar, Wordstar for Windows, and databases such as dBASE III, III+ and IV. You can also easily add JPEG and GIF graphics or create hyper-text links to graphics. There is support for 256 and true color (16 million) graphics and the ability to convert BMP and PCX files to JPEG and/or GIF formats. Internet Assistant even makes it simple to add video to your HTML documents.



### WEB Office Works With WinWord 7

One of the most important features of the Web is Hyperlinks. These links allow you to connect a Web document to any other document or file located anywhere on the WWW. With Internet Assistant, creating these links is extremely easy. You can link a document to another one of your own documents or to a URL with the click of a button. You can also have a URL quick list so you can choose URLs from the "bookmarks" or "favorites" in your browser.

Other features include the point-and-click creation of interactive forms with radio buttons, pull-down lists, check boxes and buttons; support for HTML 2.0 and 3.0 features; full support for HTML 3.0 tables; options to control table caption, cell background colors, borders, cell width and spacing.

### WEB DOCTOR

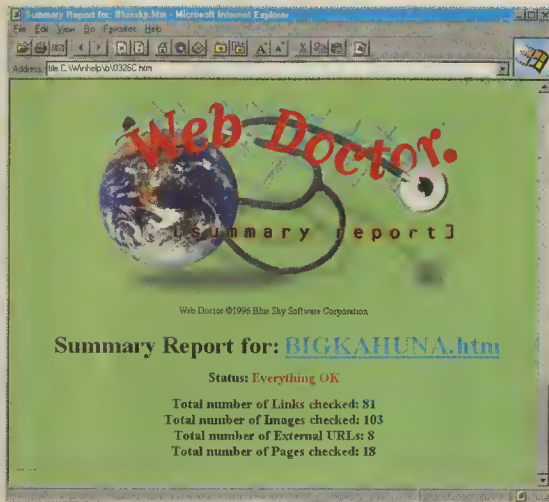
The Web Doctor is the most valuable program in the package. The Web Doctor will discover broken links, missing images, suspect graphics, pages and external URLs and provide you with a complete, easy-to-read, on-screen graphical report. Anyone who has had to

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manually check and test all the links and graphics on a large system will understand and appreciate the value of this tool.

Web Doctor also provides information such as reports of pages that have passed verification, external URLs, unused pages, unused images, alphanumeric listings of all HTML pages and all images. Web Doctor includes an Image Gallery report which graphically presents all the images in a Web site.



#### Web Doctor Reports HTML Bugs

Checking a system with Web Doctor is about as simple as it can get. Just choose your Home Page and the Doctor takes over. Once the report has been generated, you can jump from any of the visual reports to a page that may contain an error and repair it on the spot. The reports are displayed in a Web browser (your favorite or Internet Explorer which is included with the package).

Web Doctor generates the following reports:

- Pages with broken links
- Pages with Missing Images
- Pages with external URLs
- Alphabetic listing of all HTML pages
- Alphabetic listing of all images
- Image gallery report
- Suspect image report
- Suspect pages report
- Pages verified as OK

One of the features I like best is the ability to generate a "download time" report. Typical download times for each page can be generated allowing you to fine tune your pages for optimal performance. Reports can be generated for 14.4-bps, 28.8-bps, ISDN and T1 connections.

## GRAPHICS EDITOR AND TOOLS

**PaintShop Pro 3.0** from Jasc, Inc. is also included with the WEB Office suite. This is a full-featured graphics editor that provides most of the tools you will need to create, convert and edit graphics. PaintShop Pro converts popular graphic formats, such as BMP, PCX, TIF, CDR, PSD, CGM, PIC, MAC, DRW, TGA, WMF, and WPG, into GIF files and JPG files for use on the Web. The conversion also supports interlaced and transparent GIF and JPG compression ratios.

While not quite as complete as Adobe Photoshop, PaintShop Pro provides just about all the tools you would ever need along with some not found in Photoshop and other more popular programs. For example, you will find a screen capture utility which allows you to capture the full screen, an area of the screen, a window or an individual object. Another feature not found in Photoshop is a facility to do batch conversion of files. This allows you to select a group of files and have them automatically converted to another format. I also like the ability to select and adjust

the compression level and DPI output for JPEG files with great precision, on a scale from zero to 100. In Photoshop the only choices you have are low, medium, high and maximum.

PaintShop Pro also supports all TWAIN compliant scanners and input devices. A text tool allows addition of text to graphics. There are eight paint brushes for full artistic control, ability to flip, mirror and rotate graphics in one degree increments, and color reduction, palette editing and direct palette mapping to allow global changes to multiple images. Of course, there are the usual controls such as support for alteration of RGB levels, hue, saturation, lightness, brightness, contrast, highlight, shadow, mid-tone and gamma corrections.

With the **Web Graphics Locator** you can find and preview graphics. This program searches for graphics in a specific directory, drive or across multiple drives and creates a list of those it finds. From here you can instantly preview the graphics in a thumbnail view and copy them to a working directory. The Web Graphics Locator also displays information such as the number of colors, the width, the height, and the date of last modification of the selected

graphic. The locator supports GIF, JPG, BMP, PCX, CUR, ICO, MRB, SHG and WMF file formats.

The included Graphics Library provides nearly 200 royalty-free images, bullets, buttons and icons that can be included in your HTML documents.

## HELP-TO-HTML CONVERTER

The Help-to-HTML Converter converts any Windows 3.1 or Windows 95 Help files into HTML files without the need of source code. As with all the tools provided in WEB Office, all the pain has been eliminated. Converting help files is done by a simple point-and-click operation. It even creates a home page automatically based on a CNT ("contents topic") file. It also creates an HTML page for each help topic and converts BMP and WMF graphics to GIF format. The converter even transforms hotspot graphics into GIFs with corresponding map files.

Also included is the book, **Mastering HTML for Help Authors**, an easy to understand guide to the basics of HTML authoring. Included is an overview of the Internet and its terminology along with a discussion of the similarities and differences between Windows Help and HTML. It provides valuable information on different ways to create Intranet/Internet Web sites and also includes a section of tips and techniques from experienced HTML authors. You will also find a glossary of terms, a list of common HTML tags for both HTML 2.0 and 3.0 and a "Netiquette" guide.

## HOTSPOT STUDIO

The visually oriented environment of **HotSpot Studio** makes short work of creating hotspot images and their corresponding image map files for Intranet/Internet Web sites.

A hotspot graphic is an image in an HTML document which contains graphical hyperlinks or "hotspots." These could be links to other locations within the document or to other documents. Clicking on a hotspot takes one to the target page. This appears simple, but requires a pair of files (a graphic file and an image map file) that work together. The graphic file is the image seen by the user. The image map file contains the data that defines the hotspots and the information that links them to their targets and associates this data with the graphic file.

With HotSpot Studio, you draw the hotspot on the image and then select the



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target file or URL to which it is to link. Hotspot images can be created from 16 color graphics, 256 color graphics, and/or true color graphics. Existing image map files (CSIM, NCSA, and CERN formats) can also be imported and edited. Once hotspots are created, they can be quickly checked using the built-in test mode.

### CONCLUSIONS

WEB Office provides a nicely thought out suite of tools for both the novice and the experienced Web Master. Everything you need to get a Web site up and running is here. I especially like the manuals, help and tutorials provided by Blue Sky. Those new to HTML and the Internet will find a solid base for getting started in a hurry. Even the old hands will find some tips that may result in many saved hours. However, the experienced user may find some of the individual tools a bit weak.

I looked at the CD-ROM version of WEB Office (diskettes are also available). The installation went without a problem. As mentioned earlier, it did complain when a copy of Microsoft Word for Windows 7.0 was not found, but it did allow me to

continue with the installation process. WEB Office is an excellent starting point for those wishing to set up a WEB site. As one becomes more comfortable and adept at working with HTML and as the need for more sophisticated pages arises, the need may arise to use some more robust tools. However, the basics are all included here. ♦

### CONTACTS:

#### WEB Office

Blue Sky Software  
7777 Fay Avenue  
Suite 201  
La Jolla, California 92037  
Tel: (800) 571-9764 or (619) 459-6365  
Web: <http://www.blue-sky.com>  
mailto:info@blue-sky.com  
COST: A special promotional price of \$399 is currently available (list price is \$499)

#### PaintShop Pro

JASC, Inc.  
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# BABB'S BOOKMARKS by Chris Babb

## INTERNET PEOPLE FINDERS

Chris Babb is a Senior Systems Engineer for Control Masters, Inc., a Systems Integrator located in Downers Grove, IL, where he designs industrial automation software by day. He's a member of the Aquila BBS/Internet Team by night. Chris has worked with Aquila since 1990 and currently handles technical support, Web design and construction, Internet training and various other online and offline duties. In his meager spare time, Chris enjoys music, playing bass guitar, the outdoors and his kitties. You can reach Chris via <mailto:chris.babb@aquila.com>

It seems like much of the Internet hype has turned away from cool programs and applications to the prediction of the dreaded death of the Internet. A glance at *Infoworld* and Bob Metcalfe's columns will fill you in on everything you never wanted to know about how this marvelous service is on its last legs and is about to slip off the bleeding edge to be cut to ribbons on the bones of all those it has passed by. Another look at many of the letters to the editors of the leading computer industry magazines also helps this idea to spread about how slow the Internet is and how it is becoming useless. Unfortunately, folks, trying to get into a site such as Netscape a few hours after a new version is released is always going to feel pretty darn slow.

In my opinion, the slowness is not universal and is not due to the capacity of the Internet backbone itself. The real problems are those sites that failed to estimate their own popularity and those providers who think they can sell flat-rate, \$10 Internet and actually make enough money to provide adequate service.

Underestimating usage is a tough one. A well-heeled company can usually rectify this problem fairly quickly by adding equipment and increasing their bandwidth. General Motors' Web Site is an excellent example. Unfortunately, others cannot quickly upgrade due to budgetary or other constraints and we just end up living with a slow site.

On the other hand, inexpensive providers are just asking to get backed into a corner while perpetuating the slowness. Cheap Internet means lots of customers. Lots of customers means more modems, more equipment, increased bandwidth, etc. All of this requires more money, which is not generated by selling cheap Internet. The end result is that more modems (inexpensive) are added to handle the customers but the bandwidth (expensive) generally remains the same. All this means is that everyone using that service takes the hit in reduced bandwidth. I've personally seen a 28.8K baud connection reduced to something closer to 2400 baud, consistently throughout the day. This scenario is what makes the Internet seem slow. I'd be willing to bet that THIS is the real problem that most people are complaining about even though they don't realize it.

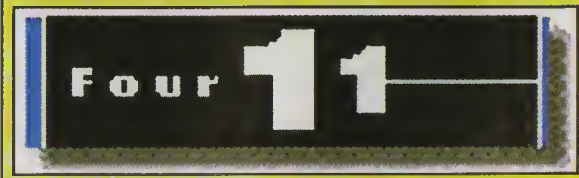
So, if we want to talk about doom and gloom and the demise of the Internet, let's be sure we are looking at it from the proper perspective. My prediction is not of the imminent collapse of the Internet as a whole, but of those Internet Service Providers who think their customers are going to be forever fooled into believing that what they have is the best they can get and what the Internet is all about.

Of course, there are some people who just don't care about anything except the price, and cheap Internet, at whatever the bandwidth de jour happens to be, is better than no Internet at all. My comment on this concept is that you get exactly what you pay for. Or less.

For this month, I decided to get back to the basics. No JAVA, no plugins, no new bandwidth hogging technology to suck the breath out of the Internet, nothing but e-mail. If you've ever wondered how to find someone or contact a company through e-mail, here are some important resources that will help you do it.

### FOUR11 - THE INTERNET WHITE PAGES

<http://www.four11.com>



Having some 6.5 million e-mail addresses at your fingertips can be a great help if you're trying to locate someone you know or someone you need to know. If you feel this way, then Four11 is the site you want at the top of your bookmarks. Four11 is one of the first sites that I bookmarked when I started using the Internet. I've found relatives and friends in abundance through this service and have also used it to make contacts at the various companies that I have to do business with.

Four11 was the first company to deliver an effective white pages directory of the Internet, but this is not its only use. Besides e-mail addresses, you can search for Web pages, search the nationwide telephone directory and find others to communicate with via Netphone services. This is an interesting service, and I recommend that you take a look at it if you are a user of Internet phone products.

There are 3 levels of service that this site provides. Free access is allowed for searching the database. This requires nothing and allows you to view up to 50 names per search. If you register yourself, again for free, you are allowed to view up to 100 names per search. Membership gives you access to more advanced features such as personal Web pages, business Web pages, PGP services and more. Membership fees range from \$35 for a personal account to \$200 for a business account.

Searching is extremely easy and customizable. You can search by first and/or last name, location,



Internet domain, college affiliation, personal interests, high school and more. Advanced searches are available to anyone who registers their own listing and expands the search capabilities considerable.

If you decide to register, you will be able to enter your primary and secondary e-mail addresses, your name, your location, your personal Web page address and can select up to 3 categories of personal information you wish to make available. These include High School, College, your current organization, hobbies and many others. These are displayed in your personal listing and are also used during advanced searches.

All in all, this is quite a useful site. It's fast, easy, free and fun to use. With the current database standing at 6.5 million entries with projections of up to 10 million by the end of the year, this is an indispensable site. Be sure to check it out.



ing just how a service such as this can be used to locate friends, lost relatives, businesses and much more. Some of these stories actually brought a tear to my eye.

Searching is made easy by this service's ability to perform "fuzzy" searches based on as little as an initial. Even misspelling the name will return pertinent results. You can narrow your searches by providing additional information such as the domain name or anything else you can think of. The search results are returned with all the information submitted to the database and are categorized as highly, probably or possibly relevant.

Adding your own entry is another easy experience. You can provide as much or as little information as you wish, including your full name, e-mail addresses, street address, phone number, group affiliations and a personal message. If you're concerned about privacy, you can also elect to activate the "Who's There?" service. This is the Internet's equivalent of Caller ID; you can be notified that someone wishes to contact you but your contact information is not given to the seeker. This is something that all of these services should provide.

Other interesting features of this site include being able to view everything in English, French or Spanish; information on advertising on this site and another interesting service that will monitor WhoWhere at specified times for the e-mail address you are searching for. When the address is added to the database, you will be notified by e-mail. Very cool site, cool features and a great, easy to use layout. Another site to add to your beleaguered bookmark listing.

The Internet Address Finder is another useful service for finding e-mail addresses as well as Web pages associated with the e-mail listings. This service boasts 3.5 million address and claims to be the easiest and most comprehensive e-mail

## INTERNET ADDRESS FINDER

<http://www.iaf.net>

### Internet Address Finder

4,689,037 listings and growing!

white pages on the Internet. I'll give them the easy but the "most comprehensive" goes to Four11.

From this site, two types of searching

can be done. The typical search for an e-mail address begins by entering a name, organization or domain. Another type of search may be done by entering the e-mail address. Both types of searches give you a listing of everything that matches your search criteria including name, location, the Internet service provider and any other information provided within the listing.

Entering your own listing is free and easy. You can supply your name, location, several e-mail addresses, your Web page address, organization and any other information you wish known to the Internet public. If you regularly post to Usenet, you will probably find your name already in the listing. Updating your listing is as easy as clicking on Add/Update Listing and changing anything you wish.

Other information that can be accessed on this site includes advertising, search help, a complete FAQ on the IAF service and information on how to compare the size of Internet White Page Services. I tried this part out in trying to determine which of these services performs the best. See my results below.

This is another excellent service that you should make note of. My only complaint is that if you add your listing and supply more than one e-mail address, anyone who does a search will see separate and individual listings when the results are returned. Other than that, give it a shot.

## OKRA: NET.CITIZEN DIRECTORY SERVICE

<http://okra.ucr.edu/okra>



OKRA was started in mid August, 1995 as a spare time project. Currently, this site contains over 5 million entries and has processed over 1 millions queries since September,

1995. This service does not have the capability to search anything other than e-mail addresses at this time.

Searching is as simple as simple can be. Simply enter the name you wish to find, press the button and your query is processed. All matching names are presented with the bare minimum of information: the e-mail address, name, organization and date of entry.

You can add your own listing by filling out a simple three-field form which asks for your name, e-mail address and organization. These entries are verified and added within 48 hours. You can also delete your outdated listings by simply entering the e-mail address in the appropriate field. Unfortunately, there doesn't seem to be much in the way of security to prevent the unauthorized deletion of a valid address.

If you're interested in a simple but effective e-mail search site, then this is the one for you.



## COMPARING E-MAIL DIRECTORIES

Most of the services listed above cull their database entries from a variety of services. Usenet is a major contributor, along with ISP's who provide listings of their members' e-mail addresses. The other major source of entries is people who are interested in making their addresses publicly available. If you don't want your name included in these listings, don't post to Usenet, ask your Internet provider to keep your e-mail address private and/or visit these sites and get the entries removed. All of the sites I visited claim that they do not sell or provide their databases to anyone and also ask that you do not either.

Everyone claims to have the latest and greatest database of e-mail addresses and that theirs is the best source. Actually, they are all similar and all different. Some have more addresses than others, but the way the information is presented has a great bearing on how big the database looks. I prefer that a database of e-mail addresses provides me with a single listing that has all of the e-mail addresses for the individual I am looking for rather than giving me one Web page per address. Four11 has this feature in the bag as far as I'm concerned.

Finally, don't take these addresses as the final word. Mistakes can and will be made when you are gathering information in the way that these services do. Above all, you'll want to use as many of these services as you can when searching for long lost cousin Egbert or that business associate who screwed you years ago. You never know which of them will have them listed.

The results below are not scientific at all but were gathered in a very simple way. Babb is not a very common name as far as I'm concerned. I never went to any school that had any Babbs other than myself, my brother Mike or my sister Kim. All the Babbs in my family (that I know of) fled from the Third Reich out of Romania and Hungary in July, 1937 and eventually settled in Chicago. Knowing this, I thought Babb was a good test for these services. Little did I realize just how many I would find.

| RESULTS OF SEARCHES FOR "BABB" |      |
|--------------------------------|------|
| Service                        | Hits |
| Four11                         | 148  |
| WhoWhere                       | 109  |
| Internet Address Finder        | 89   |
| Okra                           | 79   |

Here are a few other interesting resources that I want to share with you.

OK, so this is not an e-mail location service. But it is an extremely useful addition to anyone's collection of bookmarks. Generally, I have to dial (800)555-1212 in order to get a toll free listing. I don't always know if there is a listing but it never hurts to try, does it? Also, I usually don't know the actual location of the company I'm trying to reach and sometimes I need more than the measly two listings that Information limits you to.

This site is a snap to use. If you're not sure of what you're looking for, you can narrow things down by clicking a letter

### AT&T TOLL FREE DIRECTORY

<http://www.tollfree.att.net/dir800>



the letter A and was presented with listings that ranged from Attorneys to Astrologers to Athletic Organizations and everything else in between. Clicking on a category will pop up a complete listing of all of the companies who have toll-free numbers, their phone numbers and the states they are located in.

You also have the ability to enter a search term. Results include the closest matches that can be found. Results include the toll-free number, the company name, the type of business and the state it is located in. An advanced search is also available that allows you to search based on the number, name, city, state or business category.

For businesses, complete information is included that explains some of the advertising features available on this site. This includes the ability to place a premium listing, which enlarges and boldfaces your listing along with 2 lines of additional text to describe your company. Ad Pages allow you to make your company information available as a full page listing. Ad Sites allow to place a mini-storefront from within this site. And the ability to have your listing linked to your actual homepage.

The only drawback of this site is that only AT&T National 800 & 888 numbers are available. Sprint and MCI may or may not be available in the future. Other than this minor infraction, this site is a keeper and extremely useful.

*Editor's note: Chris' search for people-finders was interrupted by 17 inches of rain that fell on his Aurora, Illinois, neighborhood in mid-July. Coincidentally, he was testing several new digital cameras for next month's column; we'll soon see the grisly effects of 7 feet of water in one's basement. So it falls to your humble Editor at Fault to finish this expedition with a couple of other helpful bookmarks. — David Hakala*

### WHO? ME?

<http://www.who-me.com>



son's historical data — maiden name, high school, branch of military service, etc. — as well as physical characteristics such as hair color, missing extremities and so on. Then the search engine presents a list of matches ranked by their relevance to your criteria. From there, it's a matter of divining which one is The Long Lost Army Buddy you wanted. You may have to e-mail several people saying, "Pardon me, but are you the one to whom I owe five bucks?"

Where does all this personal data come from? Who? Me? developer Jim Turner, a Colorado-based executive recruiter (mail

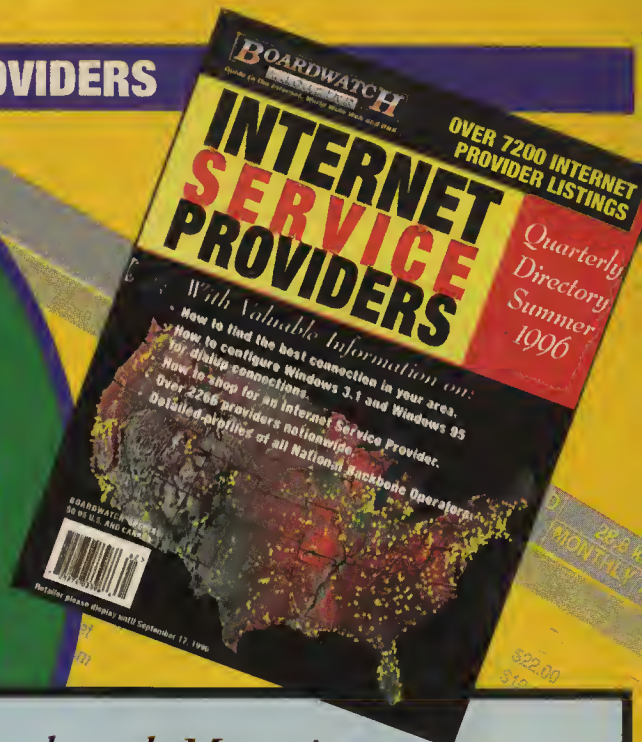
between A & Z. This will take you to a categorized listing starting with the letter you chose. I chose

Most peoplelocator services rely on "hard" data: a name, address, phone number or other unique identifier. The *Who? Me?* service allows "fuzzy" searches for people when you lack definitive current information. You can specify a person's



## DIRECTORY OF INTERNET SERVICE PROVIDERS

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Why get on the Internet

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oper Jim Turner, a Colorado-based executive recruiter (mailto:inquest@aol.com), expects that many people who want to be found will provide their own vital statistics. Examples might include school alumni, parents who gave children up for adoption and now want to reconnect with their progeny, military buddies, frat brothers and former coworkers.

The service also allows one to post notes on a public bulletin board page – “Hey, Joe Schmitz! It’s me, Danny ‘The Gipper’ Pfeifer from the Bombay Country Club egg-sucking team of 1989. Give me a call if you see this.” While one could post such a note in numerous newsgroups, it would a) draw plenty of “off-topic” flames and b) be rolled off most Usenet servers within a couple of weeks. You can also be notified via e-mail if someone comes looking for you – or someone like you. The system provides a “calling card” form in which you can fill in personal data and ask to receive e-mail if any notes are posted which contain data matching yours.



Who was that gorgeous person in the red Mercedes? All you got was a smile and a license number. If it's worth \$35 to you, this site can deliver a name, address and nationwide drivers' record for almost any individual. The "Internet DMV" can also search driver's license records, providing details of a person's driving record and often his/her current address. A search of drivers' license databases costs just \$20. There's probably less demand for it, since if you have a driver's license number it probably came from the license or a personal check, and the address came with the source.

Scary, isn't it? Rebecca Schaeffer, a Los Angeles actress best known as "the cute sister on (the TV show) My Sister Sam," was murdered in 1989 by a man who traced her home address using her license plate number. California immediately moved to "desensitize" publicly available motor vehicle records, but in many states you can still walk into a DMV office, plunk down about \$3 and get all the information you need to locate someone with just a license plate number. More recently, a convicted murderer located the addresses of several senior executives of an Alaskan business through DMV records - then robbed them all at gunpoint. This site costs more, but it's a lot more convenient for tracing those out-of-state tags.

The American Information Network specializes in researching public records. The Internet DMV is just the tip of AIN's iceberg. It's "Sherlock" database at http://www.ameri.com/sherlock/sherlock.htm provides access to federal, state and county level criminal records; civil case records; consumer public filings (bankruptcies, tax liens, judgments) and credit reports, workman's compensation records, professional license records and even education verifications.

There are many legitimate and beneficial uses for online access to public records. One of the best, as AIN points out, is the ease with which you can verify the accuracy of your own public record, before it costs you a loan or gets you jailed on someone else's arrest warrant. Locating people who owe you money is another innocuous application.

But AIN and other online records researchers make it all too easy for employers to screen out job applicants on the basis of "excessive" workman's compensation claims, divorce status and other criteria they can't legally ask about in job interviews. Usually, a candidate will not learn the reason for his/her rejection.

Then there are all the nuts out there...

## NUTSITE© OF THE MONTH

### REALAROMA©

http://realaroma.com/realaroma.cgi

Smell The Sites, or anything else the sickoes on the Internet



will dream up. Can you imagine! We've all seen or read foul things on the Internet at some time or another. Some of us have even gagged at them but the thought of adding the rich aroma of some wacko's fantasy closes my windpipe faster than an asthma attack.

Is this real? You figure it out. If it's not, it's pretty funny. On the other hand, if it is real, it's even funnier! RealAroma introduces a whole new dimension to the Internet by allowing you to share smells in real time over the Internet. By using the RealAroma Drive and ATML (Aroma Text Markup Language) your nasal membranes can enjoy the Internet in a way that you never thought possible (shudder).

This site includes examples of ATML and hundreds of stinking recipes to unleash on unsuspecting people. Of course, they also need to have the Aroma Drive so I guess they aren't so unsuspecting after all.

I think this is pretty funny and I gag at the thought of what could be done with a device such as this. Maybe by the time you read this, they will even have the phone number back up so that you can enjoy a foul stench or two.

I have these as well as all of my past articles available for browsing at:

http://www.aquila.com/babbs.bookmarks/

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mailto:cbabb@aquila.com





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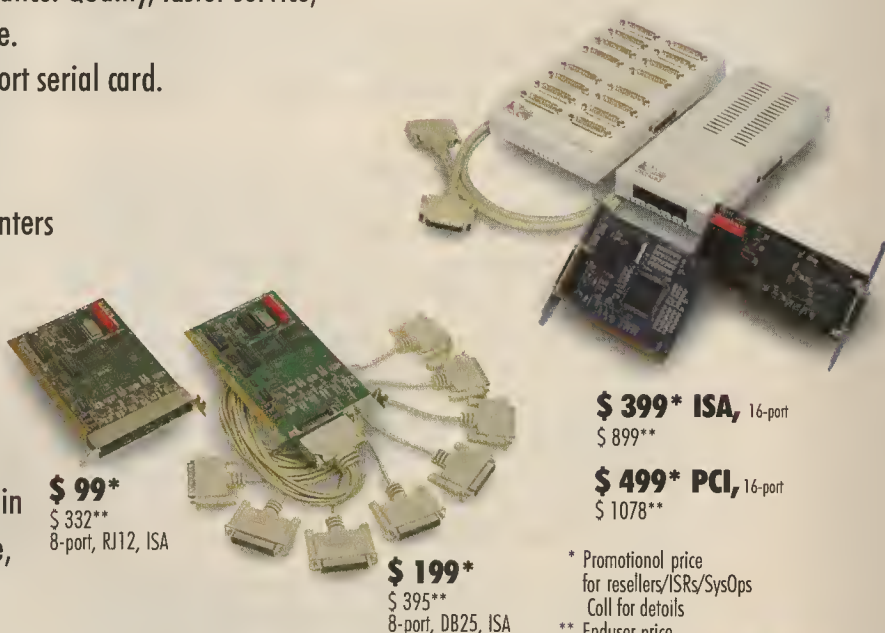
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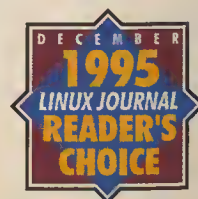
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# PUBLISHING ON THE WEB by Michael Erwin

## PART 21 - SERVER SECURITY CHECKLIST

This month we are going to look at some other web security issues that webmasters need to be aware of. For example, on a UN\*X based web server, you do not want a CGI script to be run as the "root" user, and you might want to think twice about using Server Side Includes. Why? We'll talk about that in a few minutes.

Many people think "I don't have to worry about security on my web server. I don't have anything on the server that anyone will want." Well, that may be true. But most "hackers" attack a system for the simple joy of it. They do it because they can. However, when it comes to "professional hackers," they will want something to show off as a trophy; for example, the password file. Then the "pro hacker" can see if you have a multipurpose web server, one that also handles your POP mail server. If so, they can try to crack a specific user's e-mail. That user is a bigwig with a new upstart company that might be getting ready to go IPO. Get the picture?

So now that I have you paranoid, you probably want to know what you need to do to protect your site. As always, let's learn by example...

### UNKNOWN CGI SCRIPTS

You downloaded a great new CGI script. The CGI script was found by using a web search engine. The CGI script came from a little known ftp site in a galaxy far, far, away. It was already compiled for your web server platform.

If you install and use this CGI script, you are a fool. Why? Well first off, you did not get it from a known source. Who is to say that the site won't vanish next week, and all traces of the script's author? Since you only have the compiled version, you don't know whether or not the CGI script sends your password file to a remote system, creates a secret user account or even blows away your hard drive. Even if you get the source code to a CGI script, make sure to look through the code for holes. If the code is written in a language that you do not know, for example PERL or C, then get someone you trust to look through it.

### LEAKY CONFIGURATION FILES

Take a look at your web server's configuration file, especially if you are running NCSA, CERN, Apache or even NCSA derived servers, like the Netscape server or O'Reilly's WebSite. Verify that you do not have a line like **USER ROOT**, **USER ADMIN** or any user's name that has **root** or **super user** privileges. This is the user name or uid that the web server assigns to CGI scripts. If a CGI script executes as **root** or another

privileged user, then the CGI script has complete control over your system.

If your server has something like "USER ROOT" or "USER ADMIN" in its configuration file, stop reading right now and go create a **WWW** or **http** user that has only the required privileges. Then change the USER statement in your server's configuration file to **USER WWW**. As an added protection, have the configuration file owned by another low-privileged user and set the configuration directory to low privileges. For example, if you run a UN\*X system, set the **CONF** directory to 700. If you run an NT based server, you can do the same thing, through the administration utilities.

### USERS' SCRIPTS

One of your users places a CGI script or for that matter a regular shell script on your web server. Think about this. Do you know what that CGI script does? Does it open any security holes?

You, as webmaster, may want to require that each user submit the CGI script to you for a security check. You can even take this further by providing some CGI scripts for users that allow the flexibility to handle multiple users.

For example, I love **WWWCount v2.2**. It allows me to set up one page-hit counter for all of my users. The users can modify the digits, frames, colors and size based on the way they link to the counter. Then, the users do not need to have their CGI page hit counter on the web server. It's also easier to maintain one hit counter instead of several varieties.

You can protect your CGI directories by only allowing read and execute privileges. If you run a UN\*X based web server, set the CGI-BIN directory to 711.

### SHARING SERVER SPACE

If you rent web space from your ISP or a WSP, do all of the clients use the same web server and if so, does the "landlord" allow everyone to place CGI scripts on the server? I know that most of us have seen the e-mail ads saying, "We run Netscape's secure server." Then a few lines down, they say "Use your own CGI scripts." Right?

If this sounds like your setup, you might want to reconsider it in certain situations. What happens if you collect data of a sensitive nature, say addresses, phone numbers or credit card number? Then another user places a CGI script to "grep" for important data on the server and his CGI script e-mails the information to someone else. Are you scared yet?

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "The WebMaster's Resource." It is available for US\$24.95, plus US\$2.00 shipping in the United States or US\$5.00 elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information mailto: mikee@eve.net



## ACCESS CONTROL FILES

Take a look at a segment of an **access.conf** file, which is shown in listing 1. Particularly look at the first two lines. In this example, the first line tells the web server what the security is on the CGI-BIN directory. The next line, the **OPTIONS** line, is the one that will give us problems.

In the **OPTIONS** line, we tell the web server that if someone requests the url: **http://www.boardwatch.com/cgi-bin** without specifying the CGI script to run, then the web server should generate an HTML directory index of the CGI-BIN directory. There is no need to tell the world what CGI scripts are available on your web server!

### Listing #1

#### EXAMPLE OF INSECURE ACCESS.CONF FILE

```
<DIRECTORY /var/www/cgi-bin>
  OPTIONS Indexes FollowSymlinks
  AllowOverride None
  <LIMIT GET>
    order allow,deny
    allow from all
  </LIMIT>
</DIRECTORY>
```

The other **OPTIONS** item, **FollowSymlinks**, can lead to another problem on UN\*X based systems. For example, if someone creates a symbolic link from **/var/www/cgi-bin** to another directory or even to another specific unsecured script, almost anything can be done to your system.

The **FollowSymlinks** option matters even for the other directories. For example, if you allow **FollowSymlinks** on a non-dedicated server, a user can create a symbolic link from his directory to the **/etc/passwd** file, or any other file on the system for that matter.

Listing 2 shows a much more secure **access.conf** file. The **"FollowSymlinks"** directive should be removed from all your directories, especially if the web server is not dedicated.

### Listing #2

#### A MORE SECURE ACCESS.CONF FILE

```
<DIRECTORY /var/www/cgi-bin>

  OPTIONS
  AllowOverride None
  <LIMIT GET>
    order allow,deny
    allow from all
  </LIMIT>
</DIRECTORY>
```

## SERVER-SIDE INCLUDES

Server-side includes, or SSI, are used to put additional real-time data in an HTML document as the server sends the document to the requesters browser.

There is nothing wrong with using SSI if you run a dedicated web server. I like SSI a lot. However, the nature of SSI is for the web server to add something to a requested HTML document. Again, think for a second... what would happen if I put the following lines in a HTML document, that is on a SSI enabled web server:

```
<!--#include file="/etc/passwd">
<!--#include file="/u01/bpm/creditcard.dat">
<!--#exec cmd="format c: /u/q">
```

If you had corporate clients, they would be gone by now. However, if you are using a NCSA derived web server, you can do something like what is shown in the **access.conf** file in listing 3. Here we have changed the **OPTIONS** directive to allow includes, but to not allow the web server to actually execute some code in the specific directory.

### Listing #3

#### SECURING SSI

```
<DIRECTORY /var/www/docs/client/a>
  OPTIONS Includes IncludesNOEXEC
  AllowOverride None
  <LIMIT GET>
    order allow,deny
    allow from all
  </LIMIT>
</DIRECTORY>
```

## SOURCE CODE SECURITY

Make sure that users can not ftp your custom CGI scripts from your web server. If they can, a "hacker" can look for inadequate security or holes in the CGI scripts.

However, there are a couple of topics on securing the contents of CGI scripts, and only you can make the final decision.

For example, when you buy a commercial software package, you do not get the source code to the program. Why? First off, they don't want you to see the "proprietary" internal structure of the program. Second, the authors of the package do not want people to see what the package really does, and then to exploit some undocumented weakness or "features." Sometimes this is referred to as "Security through Obscurity."

The rule of thumb is this: If you write CGI code for your site, do not make the source code available. If you use someone else's CGI script, get a copy of the source code, look through it, and then compile it yourself.

## "SECURE" TRANSACTIONS

Don't assume that if you use one of the many "secure" web server packages, or browsers, that all of your data is secure. If other measures are not taken after data is received and stored, the data may be compromised after the fact of a "secure transaction."

Sometimes, the browser itself can be a security hole. For example, in the usenet group **news.comp.privacy** a gentleman named Scott Weston pointed out that, in Netscape's 2.0beta, a web server could request from the browser a list of URLs, that the end user had visited.



Here is a list of some ideas that you can use to make your server more secure.

- Verify all access rights and required privileges to important directories.
- Prevent unauthorized users from FTPing into your CGI-BIN directory.
- Turn off all nonessential network services.
- Create another web server for specifically running your CGI scripts.
- Watch for any mysterious user accounts on the web server.
- Disable e-mail services on the web server.
- Turn off SSI on unsecured web servers.
- Turn off FollowSymLinks with the OPTIONS directive.
- Only allow the execution of CGI scripts from a specific directory.
- Do not run the CGI scripts as **root** or **admin**.
- Last, but not least. Do not run the web server as **root** or **admin**.

Again, all of this is complicated, and it is attention to matters like these that separates professionals from amateurs. It also separates the "hackers" from your world. ♦

Mikee@eve.net

### SERVER SECURITY RESOURCES

For more information on securing your Web site, I recommend that you visit:

CERT <http://www.cert.org>

COAST <http://www.cs.purdue.edu/coast>

[news:comp.securitycomp.security.unix](mailto:news:comp.securitycomp.security.unix)  
[comp.infosystems.www.cgi](http://comp.infosystems.www.cgi)  
[comp.languages.perl](http://comp.languages.perl)

### BOOKS:

*Special Edition: Using CGI*; QUE Publishing  
<http://www.mcp.com/que> ISBN 0-7897-0747-3

*Practical Unix & Internet Security*; O'Reilly and Associates <http://www.ora.com> ISBN 1-56592-148-8



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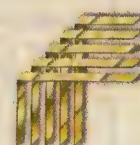
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| Internet Conn. Pkg.  | 229   |
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| U.S. Robotics Modem<br>(33.6 Sportster)                                | 199   |
| Stallion Multiport Bd.<br>(Expandable 4-64 ports)                      | 188   |
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# WEB SERVERS DISSECTED by Michael Erwin

## SCO INTERNET FASTSTART



# SCO

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "The WebMaster's Resource." It is available for US\$24.95, plus US\$2.00 shipping in the United States or US\$5.00 elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information <mailto:mikee@evee.net>

The first time I used one of The Santa Cruz Operation's UN\*X products was back in the way early 80s. It was a little operating system called XENIX. If I remember it right, XENIX was partly bought by SCO from Microsoft, and I think Microsoft stills owns part of SCO. We ran XENIX on a TRS-80 Model 2. It had either a 68000 or Z8000 processor, 128kb of RAM, and an 8-inch Single Sided floppy. Not to mention a 5mb external hard drive that measured 2 feet by 2 feet. We even had a 300 baud modem. It was a great thing, "Multitasking before Multitasking was cool."

My most recent experience with SCO UN\*X was about 4-5 years ago. I was building an ISP infrastructure for a small company. They paid \$1300 for the basic OS. Oh, you want TCP/IP networking and services? That was another \$400. And yes, I do need a C compiler, for another \$1000. Talk about building from the ground up! It was at that point we could begin building the ISP, with a POP server, Gopher server, INN'd, GCC, and eventually we put up an early alpha release of NCSA's web server. It took a lot of long nights that turned into days, which... you get the picture. Over budget, and slightly behind schedule. But when we finally got it done, it was a very stable and reliable system.

So to say that I have mixed feelings about dealing with SCO is an understatement.

SCO sent their latest product "SCO Internet FastStart v1.0" in for me to dissect. This is going to be fun!

This product is actually a well-integrated collection of products. The operating system is for Intel x86 CPU systems. The base operating system is known as **OpenServer Release 5**, which is based on System 5. Many of you may remember that UNIX was bought from AT&T Labs by Novell. Then last year, SCO bought it from Novell.

The product came in a normal sized box. The package contained one floppy, one CD-ROM, a couple of manuals. The main manual is 320 pages of condensed information. No fluff in this manual.

I installed SCO Internet FastStart on the following system.

### TEST SYSTEM

Intel Pentium 133mhz CPU  
32mb of EDO RAM  
2gb SCSI HD  
S3 PCI Video Controller  
3Com 3C509c ISA Combo Ethernet Card  
Toshiba 3401b External CD-ROM drive

This is the same system as what I used for the BSDI v2.1 dissection last month, so this should give us a fair comparison between SCO and BSDI.

### INSTALLATION

I wish I could say that the installation went without a hitch. Unlike BSDI, the SCO installation reported that it could not find my Adaptec 1542C hard drive controller. After verifying the settings on the Adaptec, I reformatted the SCSI hard drive using the ROM utilities built into the hard drive controller. Still no joy.

O.K., time to go through the manual. On page 126, I found a section cryptically entitled "Using bootstrings." After reading the next couple of sections, I determined that SCO was looking for standard settings on the Adaptec controller. Of course mine are not standard.

So I had to construct a bootstring for my configuration, to tell the operating system the name of the adapter, base address, interrupt and dma. I knew all of that. However, the adapter name gave me problems. It seems that ADAPTEC is not the driver name. After searching through the manual I found nothing on the Adaptec except for an example showing how to configure an Adaptec 1522. Hoping I could spoof the OS, I used that boot string with my base address, irq and dma. Nothing. O.K., since the manual shows an adapter name of "spad" for the 1522, I wondered what would happen if I would drop the "sp" and just use "ad" for the adapter name.

So I rebooted the system. When the system displayed a "Boot:" prompt, I typed in:

```
defbootstr adapter=ad(0x334,15,6)<ENTER>
```

Bingo!



After a few questions about machine name, graphics and such, the machine did its own thing for about an hour. Then the system was ready to reboot. Not a great start, but if any of you have worked much with NT, OS/2 Warp, or Solaris x86, this is about right. Compared to BSDI, which took about 20 minutes or so, SCO took over three times longer to do the basic install.

After rebooting, I needed to enter the bootstring again and press **enter** to bypass a set-time prompt. The system came up with a login prompt. Finally!

You should know that SCO, by default, sets up 12 virtual terminals. The user, at the system console, can cycle through the virtual terminals by pressing combinations of keys. For example **CTRL-ALT-F8** will switch to TTY08. The terminal corresponds to the appropriate function key. Another SCO default is that if you switch to virtual terminal 2, or TTY02, you are presented with a GUI X windows login.

After logging into the system. I was presented with SCO's **OpenDesktop**. Talk about a nice GUI environment! SCO's OpenDesktop incorporates the best of Motif, the Common Desktop Environment, FVWM and OpenWindows. I really like OpenDesktop. The best way to explain it is a cross between OS/2's Desktop and Motif. The more I use it, the more I like it. The desktop is clean, simple and intuitive to use.

## CONFIGURATION & ADMINISTRATION

Now that I had the base SCO Internet FastStart installed and working, I was ready to start doing the custom configuration of the system. Unlike BSDI, which uses a bunch of shell scripts to do the configuration and administration, SCO Internet FastStart uses either character based utilities or GUI utilities from within the OpenDesktop. I chose the latter.

It's at this point I double clicked on the "Software Manager" utility. I was then presented with a Microsoft Explorer type of menu. It showed that only SCO Internet FastStart v1.0 was installed. That seemed reasonable, but when a vendor gives you a tool like "Software Manager," you need to explore a little. Why? Because, there has to be more that can be installed. So I clicked "Software" on the menu bar, then on install. I was then wowed by the following list of software that I could install:

SCO OpenServer Advanced  
Hardware Supplements  
SCO ARCserve/Open  
Lite from Cheyenne  
SCO Advanced File and Print Servers  
SCO Internet Supplement for FastStart  
1.0 & OpenServer 5.0.2  
Netscape Commerce Server v1.12  
Netscape Commerce Server International  
v1.12  
Netscape Proxy Server v1.12  
Netscape Proxy Server  
International v1.12  
SCO Doctor Lite  
SCO Internet to NetWare Gateway  
SCO Merge  
SCO Symmetrical  
Multiprocessing Support  
Microsoft Client Software  
for Advanced Server  
SCO OpenServer Development System  
Application Development  
Libraries and Linker  
SCO OpenServer Enterprise System  
German Support  
SCO OpenServer Enterprise  
System French Support  
SCO Virtual Disk Manager  
SCO Virtual Disk Manager  
German Support  
SCO Virtual Disk Manager  
French Support  
SCO Internet Security Package  
SCO Internet Security Package  
International  
SCO Wabi v2.02

I hit the mother lode! Look through that list again. Talk about getting your money's worth! The ones that really caught my attention was the inclusion of a lite version of Cheyenne's Arc-Serve/Open, Netscape's Commerce Web Server and Proxy Server. Not to mention the Internet to NetWare Gateway software that many companies get a bunch of additional money for.

Those of you running a Microsoft based environment can use the file and print services of SCO Internet FastStart. That is another nice feature.

Did you notice the last package on the list, **Wabi**? O.K., what's Wabi? Windows Application Binary Interface. That means you can purchase a license for Wabi to run certain Windows applications under UNIX.

Overall, configuration is a snap and I loved SCO's GUI interfaces.

This leads me to administration of SCO's Internet FastStart. All of which is also available via GUI interfaces. Compared to the other UN\*X operating systems, SCO is heads above the pack.

Like BSDI, SCO's Internet FastStart is aimed at ISPs, WSPs and intranet customers. Internet FastStart will act as a terminal server and a router with the appropriate hardware. Matter of fact, SCO has included Morning Star's PPP dial-in and dial-out support, and of course you also manage it with a GUI package.

## MULTI-HOSTING CAPABILITIES

Another item many of you might be interested in is SCO's support for SMP, or Symmetrical Multi Processing. This gives you the ability to upgrade your system to support those high performance dual, quad or more, Intel processor systems. Can you imagine the performance of a 4 processor, 200Mhz Pentium Pro? Talk about a screaming server. The system could eat a T-3 pipe for lunch, and not even hiccup.

This support for SMP puts SCO in the league of IBM's AIX, SGI's IRIX, and SUN's Solaris operating systems and hardware.

Another advantage SCO Internet FastStart gives you is the ability to administer the internet services through a web browser. See Figure 1. This borrows from Netscape's use of using the web browser for administration. Also when you click on help at any time, it starts up a web browser to display the help. Hmm... I just remember reading that Microsoft is going to do the same thing.

## SERVER SOFTWARE

It is very hard to argue with running the included Netscape's web server software under UNIX. Since SCO Internet FastStart is based on UNIX, it allows you to use a variety of web server packages, like Apache, NCSA or Cern servers.

SCO also includes Netscape's Proxy server and additional fire wall software all included in the package. This is a plus for those of you building an enterprise solution.

SCO also included something called SCO Doctor. This gives you the ability to monitor and manage across an enterprise installation. You might not need it now, but once you have more than a couple of systems running in your environment, you will need it.

## ISSUES AND PRICING

One positive issue that I need to talk about is third-party support of commercial software and hardware products. SCO is supported by so many third-



party products that BSDI and Linux have added a utility to give their operating systems the ability to run some SCO character-based programs.

This third-party support is a BIG plus. For example, you can purchase Oracle 7 RDBMS and Web Server for SCO. So if you are going to need an Oracle platform, SCO's OpenServer 5 will be fine. Since

Internet FastStart has a base of Open Server 5, you can purchase Oracle7 for it.

Installing additional included software takes a lot longer than it should, but who knows what gyrations the operating system is going through. It works very well — slow, but well.

Except for the little problem of configuring the Adaptec card, I have not found any holes in what appears to be a very solid operating system.

The price for SCO's Internet FastStart is \$995.00, the same as BSDI v2.1. SCO is very specific on what hardware Internet FastStart will support, so please contact SCO about the supported hardware before ordering this nice package.

#### PERFORMANCE

SCO's Internet FastStart seems to be somewhat slower than BSDI. I have also talked to a few others about this, and most of them agreed. However, that might also be from running 12 virtual terminal sessions, instead of BSDI's default of 1.

As always, add MEMORY!♦

#### DISSECTION SUMMARY

| AREA                | RATING |
|---------------------|--------|
| PRICE               | 👍      |
| INSTALLATION        | 👍      |
| ADMINISTRATION      | 👍      |
| USER AUTHENTICATION | 👍      |
| DOCUMENTATION       | 👍      |
| CGI HANDLING        | 👍      |
| PERFORMANCE         | 👍      |

**AUDIENCE:** Internet Service and Web Space Providers, Intra Nets, Corporate Sites and Complex sites, and anyone looking to connect a Microsoft Clients and/or Novell Networks to the internet

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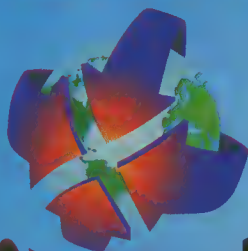
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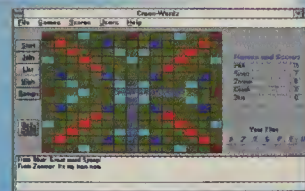
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# CONSUMMATE WINSOCK APPS by Forrest Stroud

The applications reviewed here and many more are available on Stroud's Consummate Winsock Apps List, <http://www.stroud.com> and <http://www.cwsapps.com>.

Forrest H. Stroud is a recent graduate of The University of Texas at Austin.

The Information Systems and Data Communications Management major is currently working as a full-time internet consultant in College Station, Texas. Stroud can be reached at <mailto:neuroses@stroud.net>.

## VDOPHONE

## VDOPhone

**Desc:** Real-time text, audio, and video-based communication on the Net  
**Pros:** Integrated audio and video chatting, solid collection of features  
**Cons:** Lacks some of the features found in high-end Net phone clients, A/V quality could be improved  
**Location:** <ftp://ftp.vdolive.com/pub>  
**Filename:** `vdophone.exe`  
**Status:** Free trial release  
**Company:** VDOnet Corp.  
**Website:** <http://www.vdo.net/products/vdophone>

VDOPhone takes the Internet phone craze to a new level by integrating real-time video capabilities with solid audio and text-based chatting. Now not only can you converse with others in real time all across the world for just the cost of the Internet connection, but with the necessary equipment you can also show yourself or any moving image to anyone else. Both black and white and color video can be played quite clearly in a 2x1.5 inch viewing area — the size can even be doubled (but with a dramatic loss in clarity). The frame rate is acceptable considering the medium but could still benefit from improvement. Audio quality suffers a similar fate, acceptable but inferior when compared to the likes of Real Audio, Internet Phone, and WebPhone. Despite these shortcomings, VDOPhone delivers the unprecedented and does so in enviable fashion. VDOPhone supplements its communications skills with an impressive set of features. Event logs, greeting messages, quick notes, caller history, audio and video slider controls (tuners), and online server support are just a few of the hot features to be found in this cool product.

VDOPhone offers audio and text-based chatting, features lacking in apps like CU-SeeMe and MPEG players. Its video capabilities put it a step ahead of Internet Phone and WebPhone. VDOPhone lacks the whiteboard and conferencing features found in PowWow and other Internet phone products. It also lacks Caller ID support, call waiting, file transfer capabilities, and voice mail. Overall, if you don't need real-time video, you'll likely prefer apps along the lines of WebPhone, PowWow, and Internet Phone. However, if you want a product that has it all, from text to audio to video and nearly everything in between, VDOPhone is definitely the app for you.

## GRAVITY



**Desc:** A powerful new rules-based news reader designed to simplify your life  
**Pros:** Tons of features and user-configurable options, extensive online help, easy to use  
**Cons:** Lacks spell checking capabilities and multilingual functionality, 32-bit only  
**Location:** <ftp://microplanet.inter.net/pub/microplanet>  
**Filename:** `grav100.exe`  
**Status:** Commercial software - \$44.95. 30 day free evaluation  
**Author:** MicroPlanet, Inc.  
**Website:** <http://www.microplanet.com>

Gravity offers the ultimate in user configurability — every conceivable option from screen layout (13 assorted four-pane and five different three-pane views) to article layout (thirty-two message attributes can be mixed and matched for ultimate customization) has been developed with the end user in mind. The usual newsreader features are included — internal database and offline/online options, send and receive mail capabilities, multiple signature files, right mouse button functionality, a Bozo Bin (i.e. kill files), online help (there's even a helpful hints and tips section), and a status bar for monitoring download progress. But Gravity goes beyond the standard.

Gravity takes automatic file decoding to new heights by adding an image gallery feature, which allows users to organize, view and delete downloaded images and movies. Gravity launches the viewing application of your choice (or defaults to the app listed in your system registry). Incoming rules and filters is another area where Gravity excels. In addition to kill-file capabilities, Gravity gives you the opportunity to identify key articles by playing sounds or displaying text messages, to automatically forward articles to friends, to mark specific news clippings as important (for later use), to automatically delete articles, and more, all based on advanced conditional statements. Full hypertext functionality is another of Gravity's strong points and includes the ability to automatically run helper applications for mail, web, gopher, telnet, and FTP activities. Finally, Gravity offers excellent search and find capabilities, especially for identifying newsgroups that meet your needs. Type in any keyword and Gravity automatically finds all newsgroups that contain the word anywhere in their hierarchical name. While Gravity does lack some critical features (most notably, integrated spell checking and



multilingual capabilities), it is definitely one of the net's elite newsreaders and is an app to be reckoned with, especially by its competitors.

## WETSOCK FOR WINDOWS 95

**Desc:** Delivers current weather conditions and forecasts to your desktop

**Pros:** Direct delivery of weather conditions and forecast to your computer; one time fee of \$12

**Cons:** Limited to only one city, user interface could be made more intuitive

**Location:** <ftp://ftp.wimsey.com/priv/locutus>

**Filename:** wetsock?.zip

**Status:** Shareware - \$12 (non-profit) or \$25 (commercial)

**Company:** Locutus Codeware

**Website:** <http://vanbc.wimsey.com/~atekant/wetsock.htm>

WetSock is a Windows 95 specific weather client that delivers current weather conditions and forecasts to your desktop via an icon in the Windows 95 tray bar. The icon graphically portrays the current weather conditions in the city of your choice, and clicking on the icon will bring up additional information. Information includes current temperature, humidity level, wind speed and direction, barometric pressure, and general weather conditions. In addition to current weather conditions, you can access 2-day and extended weather forecasts for most major cities in the United States. Unfortunately, WetSock is currently limited to locations in the United States. Also, cities are not sorted alphabetically and can therefore be relatively difficult to find. Only one city can be monitored at a time. Despite these shortcomings, WetSock offers a quick and efficient service for displaying the latest weather information for your favorite city. What makes WetSock even more impressive is that it bundles a multitude of features into a small (50 Kb) and inexpensive package. If WetSock can improve on its current shortcomings, the forecast looks bright indeed.

## WEBAGENT AND SUPERBOOKMARKS

**Desc:** A web assistant designed to automatically download web sites for you

**Pros:** Easy downloading of your favorite web sites, integrated scheduling utility

**Cons:** Less powerful and intuitive than apps like Surfbot and WebWhacker

**Location:** <ftp://ftp.webcom.com/pub1/igs/win>

**Filename:** wagent.exe

**Status:** Shareware - \$29.95

**Author:** Insanely Great Software

**Website:** <http://www.webcom.com/igs/wagent.html>

WebAgent is a web assistant similar to Surfbot, WebWatch, and WebWhacker that will periodically check a collection of URLs to determine which web sites have recently moved or changed. This automatic process saves you the time of manually checking your favorite web sites each day to see if any new information has been posted. For example, you can have WebAgent check ESPN SportsZone each day to see if anything new is going on in the sports world or you can have it scan The CWSApps List for the latest updates. This handy utility works with Microsoft Internet Explorer and Netscape Navigator to let you view any pages that have new information. WebAgent has an integrated scheduler to help you determine how often to check pages for new information. In addition to single page downloads, WebAgent will also allow you to download entire sites and external links. While apps like Surfbot and WebWhacker may be easier to use and slightly more powerful, WebAgent does offer a solid selection of features at a reasonable price. Its companion utility, SuperBookMarks doesn't fare quite as well. SuperBookMarks functions similarly to the bookmark managers found in most web browsers (Internet Explorer and Netscape, for example), but in most cases the web browsers' bookmark managers are much more powerful and quicker to use than SuperBookMarks. ♦

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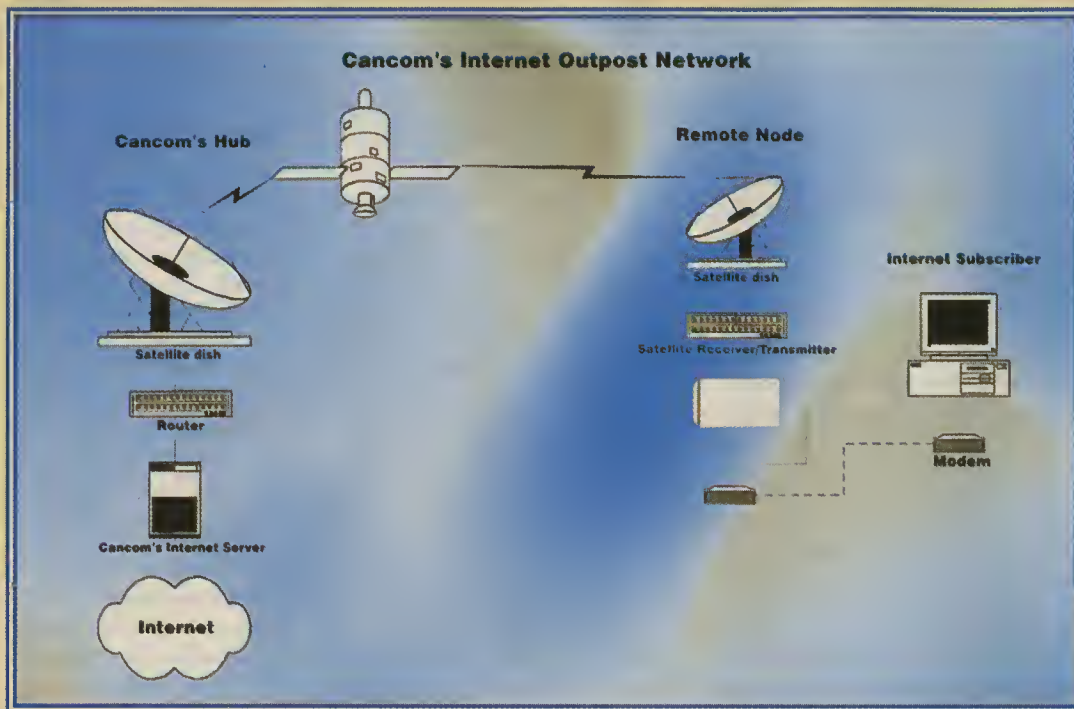
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## CANCOM - Beaming Cyberspace to Canada

In recent issues, we've put the spotlight on ISPs who are providing Internet access in remote areas of the U.S. It can be tough — not to mention mighty expensive — to stretch a T1 across a couple hundred miles of rugged terrain in order to extend the reach of the Net into small geographically isolated communities.



Internet Outpost Network was launched in October of 1995, and the company hopes it will provide competition to the national Internet service that Bell Canada and the Stentor Alliance (a coalition of Canadian telcos) is beginning to roll out.

In remote locations, a Cancom VSAT (very small aperture terminal) satellite dish antenna enables a local dealer to connect subscribers to an Internet gateway server at Cancom's network control center in Mississauga, Ontario. ION subscribers then access the Internet using a local dealer's telephone number, or through cable modems supplied by local cable television companies.

Cancom's Network Control Center runs 24 hours per day, seven days a week, centralizing all computer operations, so ION dealers don't even have to operate and maintain their own servers. Instead, they can concentrate their resources on providing customer support, marketing and sales.

I spoke with Brad Davies, Internet Product Manager for Cancom, about ION and the challenges involved in bringing the Internet into rural Canada...

But our Canadian neighbors face some even bigger challenges in terms of making high-speed Internet access available and affordable in remote communities. Cancom Business Networks is doing something about that. Cancom, one of Canada's leading satellite communications firms, is leveraging its experience with satellite technology to create the **Internet Outpost Network**, offering turnkey ISP opportunities to entrepreneurs in remote areas, and linking communities to each other and the world.

Cancom's two-way satellite system connects ISPs to the Internet at speeds up to 2MB per second, and does so without telephone lines or long distance fees. That must cause a little sweat on the corporate brows of the Canadian telcos!

Cancom is no newbie in the communications arena. In 1983, they received the first license in Canada to deliver television and radio signals by satellite to small and remote communities. Cancom was also the first company in the world to scramble television signals for commercial use. Over the years they have diversified into providing data communications over satellite and terrestrial links.

**DOC:** What type of problems did you have getting your satellite network set up for use in transporting Internet data, and how did you solve them?

**DAVIES:** We've been running satellite networks for 15 years, but the Internet presents some unique challenges because it requires very high bandwidth. Also, configuring the bandwidth to match the profile of a "typical" Internet user required some work. Some custom engineering was needed to make it all work.

The main advantage of using satellite bandwidth as opposed to terrestrial lines is geographic sharing of bandwidth. Our leased lines in the sky can be shared with ISPs in different time zones, so when users in British Columbia are hitting their peak hours for Internet use, our users in Labrador have gone to bed.

**DOC:** Are there others in Canada or the US using satellite for Internet delivery on a large scale?

**DAVIES:** No, not that I know of, although there is the PCDirect from Hughes Network Systems. But their product is



a one-way broadcast only, and users need a regular dial-up account to return. It (satellite) is very expensive, so that's why very few have done it successfully.

**DOC:** *What type of equipment and investment is needed on the dealer side of the satellite?*

**DAVIES:** Basically they need a satellite antenna, a transmitter/receiver, a router, server and modems. Our systems start at \$15,000 and go up to \$85,000, depending on the bandwidth required and location. The average is around \$50,000.

**DOC:** *How about end customers? Standard modem & dialup stuff? Do you offer a turnkey package for new users to install on their PCs?*

**DAVIES:** Yes, yes and yes. We had Open Text customize their Internet Anywhere Package which includes Netscape, Eudora, Hot Metal, and a newsreader for our users.

**DOC:** *I understand you do a lot of business with schools, libraries, and electronics retailers. I can understand the first two, but why electronics retailers?*

**DAVIES:** We're looking for local entrepreneurs who have a local presence. Electronics retailers may be selling computers already, so adding Internet to their store would be a natural. The retail presence is very important to us.

**DOC:** *And you're doing some deals with local cable operators?*

**DAVIES:** Yes, it's the same basic deal, except they usually require our highest bandwidth to deliver it over cable modems. The only thing that changes is the subscriptions. We can't charge by the hour anymore because the cable modems are on all the time. So, we have a basic package and then charge for heavy usage, based on megabytes transferred.

**DOC:** *How are you addressing the issue of providing local content to such a far-flung customer set? Do local newspapers or radio stations play a role there?*

**DAVIES:** The idea of using local entrepreneurs is based on the idea that they will be the best at developing local content. So we give them a homepage and the tools they need to develop it, and they go do it. We see the first revenue for them in the connection fees and the second in developing local content and community pages.

We're working on expanding their "toolbox" so they can build high-tech features into their pages, without having to do all the development themselves. Local papers and radio stations have the local content, so they're naturals to maintain the pages. We help them build their structure and then let them update it.

**DOC:** *How many ION dealers are there now, and where are they?*

**DAVIES:** We have about 22 right now, with more coming soon. They're all over Canada from Labrador to the

Northwest Territories.

**DOC:** *What's the smallest remotest community you serve, and how cold does it get there?*

**DAVIES:** Oh, it gets really really cold in Inuvick, Northwest Territories, and on Baffin Island!

**DOC:** *Is there a standard web interface for all customers of all ION dealers or do the dealers roll their own site?*

**DAVIES:** The browser defaults are set to [www.cancom.net](http://www.cancom.net). Several of our ISPs have their own virtual domains, and they're free to point to wherever they like, but most prefer to identify that they are working with a major Canadian satellite company.

**DOC:** *Can you give me any details on Cancom financials?*

**DAVIES:** Our financial statements are on our web page (<http://www.cancom.ca>), but basically we're an \$80 million a year company with no debt.

**DOC:** *How many Canadians have PCs, and how many of them are wired?*

**DAVIES:** I think about 33% have PCs, 15% have modems, and 10% are wired. But these are only educated guesses.

**DOC:** *What are your future plans?*

**DAVIES:** Cancom envisioned the opportunity of the Internet Outpost Network, and we'll continue to develop similar services in the future. We're working hard to develop new services for our Internet Outpost Network members, such as Chat and VRML, so keep an eye on ION!

At this time, we have no plans to enter the U. S. market. If we do we will distribute our services through local dealers. ♦



**Brad Davies,**  
**Internet Product Manager**  
**for Cancom**

## CONNECTING WITH CANCOM

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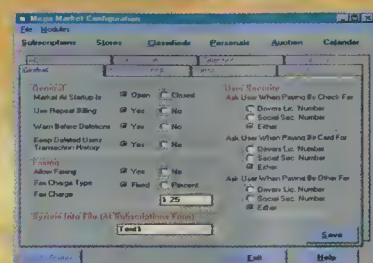
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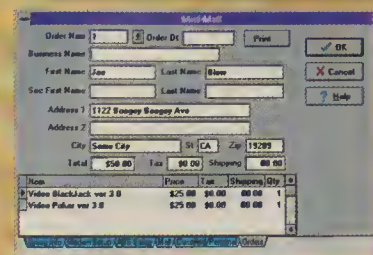
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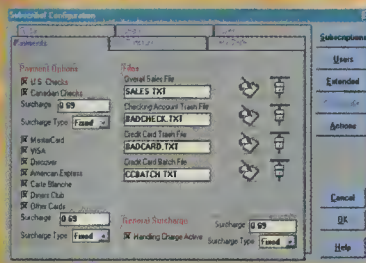
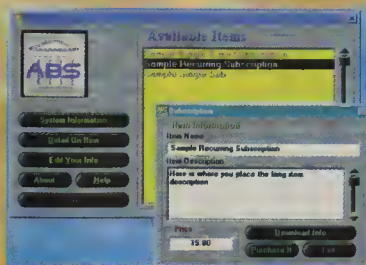
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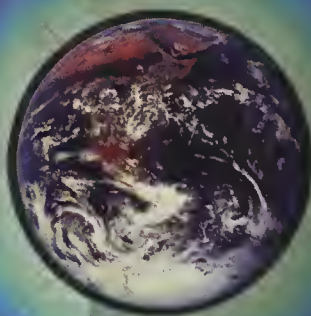
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# Telebits



## WEBSITE PRO SHIPS WITH ENCRYPTION, SDK AND ODBC



WebSite Professional, the latest generation of the popular Web server for Windows 96 and NT, includes Secure Sockets Layer (SSL) 2.0 and Secure Hypertext

Transfer Protocol (S-HTTP). The flexible server also includes three CGI flavors, the WebSite Application Programming Interface (WSAPI) and Microsoft Internet Server (IS) API compatibility. WebSite Pro programmers can develop in Visual Basic, Delphi, perl or C++. "It's clear that this is the most customizable web server package, offering the greatest flexibility to web developers," says Gina Barber, Product Manager. Developers can use any of four methods of dynamic page generation: Server-Side Includes (SSI), CGI, API and API-integrated, template-based ODBC. WebSite Pro ships with Software Development Kits (SDKs) for WSAPI, API-integrated perl version 5 for Win32, Visual Basic and server-side Java. Server-side Java development support makes it possible to rapidly develop applications that enhance the server's capabilities. Priced to move at just \$499, WebSite Pro is also available as a \$99 upgrade to WebSite 1.1 owners. O'Reilly Software: <http://website.ora.com> or <mailto:software@ora.com>. (800)998-9938 or (800)889-8969 voice.

## MICROSOFT NT CRIPPLEWARE TRIAL BALLOON SHOT DOWN

Word got out in late July that Microsoft planned to deliberately cripple version 4.0 of Windows NT Workstation so that any Web server running under that OS could accept IP connections from no more than 10 unique IP addresses in a ten-minute period. Such a limitation would have rendered the \$290 Workstation OS useless as an Internet server platform, forcing users and software developers to buy the \$999 NT Server.

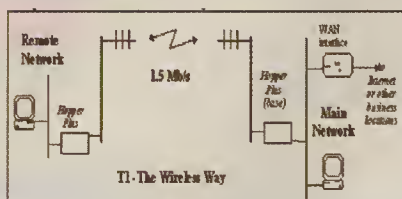
Tim O'Reilly of O'Reilly & Associates, which distributes WebSite server software for Windows 95/NT, blew the whistle long and hard, encouraging "anyone interested in maintaining the open systems nature of the Web to send email to Microsoft, post this news on their sites and in newsgroups, and write letters to editors, to put pressure on Microsoft to reverse their decision." Bob Denny, author of WebSite, condemned Microsoft's betrayal of Web developers who have supported the

NT platform: "When I first started developing Web servers in 1994, nearly all Web serving was done on the Unix platform. Considering that companies such as O'Reilly & Associates, Netscape, and a half dozen more, pushed hard in the fight to legitimize NT vs. Unix as a Web server platform over the last 18 months, Microsoft's actions are pretty extreme."

Gates must have gotten a lot of mail. Within a day, Microsoft backed off its "proposal," and NT Workstation 4.0 will ship without hard-coded limitations on IP connections. However, Microsoft spokespersons noted that the software's license agreement contains the same restriction; the hard-coded proposal would merely have enforced it.

Perhaps such a crippleware version of NT would be a good idea. Microsoft could distribute it free of charge, allowing desktop developers to come up with a marketable product before springing for the Server edition.

## WIRELESS T1 REACHES UP TO SIX MILES



T1 speed, no leased line charges and no T1 terminal equipment... just \$2,895. That's the Wireless Ethernet Bridge in a nutshell. Possibilities for ISPs include expansion into

foreign calling areas and provision of high-speed residential access with no help (or bills) from the phone company. One base station can serve multiple transceivers, whose antennas may be aimed through windows if necessary. The spread-spectrum transmission method is inherently secure, and the system also employs password protection and irregular pulsed transmission to deter eavesdropping. ComputerActive, Inc.: <http://www.computeractive.on.ca> or (613)225-4824 voice.

## CISCO ACQUIRES TELEBIT CORP.

In a \$200 million deal, Cisco Systems Inc. agreed to acquire Telebit Corp. for its Modem ISDN Channel Aggregation (MICA) technologies. Telebit's analog modem business, including the Net-Blazer and MicaBlazer product lines, will be sold to Telebit's management for a \$31.5 million promissory note and \$3.5 million in redeemable preferred stock. Telebit shareholders will receive \$13.35 a share in the deal. Cisco Systems Inc. (408) 526-4000 voice, <http://www.cisco.com>. Telebit



Corp. (508)441-2181 voice, <http://www.telebit.com>

## INTERNET BANNER NETWORK: CASH FOR YOUR WEB SPACE

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## REAL-TIME CREDIT CARD CHARGES FOR WEB SITES

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## MICROSOFT ADDS MORE ISPs TO INTERNET EXPLORER

Configuring Windows 95/NT for Internet access will soon be even more confusing. Microsoft added the "Internet Referral Server" to the Internet icon on the desktop. Clicking on that icon will connect one to the IRS (an unfortunate acronym) via a local or tollfree number, from any of 42 countries. Based on the user's country, area code and telephone exchange, the server will present a choice of ISPs with local access in the user's area, along with their subscription terms, products and pricing information. Once the user selects an ISP, Internet Explorer 3.0 will connect to the ISP's sign-up server and allow the user to sign up. Then the server will download configuration files which enable automatic log-ons to the selected ISP the next time the user clicks the Internet desktop icon.

The Windows 95/NT desktop already includes AOL, CompuServe and the Microsoft Network. Now the Internet icon becomes a Pandora's Box contain-

ing NETCOM, InternetMCI and AT&T WorldNet. No doubt other ISPs will find their way onto the desktop, further adding to consumer confusion. Is Windows an operating system or a junk-mail card deck?

## STOCK PHOTOS FAST AT PHOTODISC SITE

Need a photo image with lots of yellow, a couple of children and some grass in it? Hurry to <http://www.photodisc.com> and you can make that deadline. If you can't express what you want in words, try the Virage technology visual search. Start with a random selection of thumbnails, click on one that strikes your fancy, and get another set of thumbnails that contain similar visual attributes. Repeat this visual-search process to come ever closer to the "perfect" image.

Low-resolution (roughly 150 Kb) images can be previewed without charge. Production quality versions cost \$9.95 to \$189.95 each, depending on the resolution (600 Kb to 10 Mb) and the extent of the license purchased, which may range from "internal and presentation use" to television and online broadcasting. The site also offers a free catalog and dozens of stock photo and image CD-ROMs.

## PREFERRED SEARCH ENGINE LISTING: BUY YOUR WAY TO THE TOP

There are a dozen ways to jiggle your Web site's entries in search engines so that your site will appear closer to the top of search result lists. Most techniques are more trouble than they're worth. But now he Open Text Corp. - <http://www.opentext.com> - has simplified the process of gaining "unfair" advantage over one's competitors. Pay as little as \$2,000 for a specific search term, i. e., "travel," and Open Text will guarantee your site comes up among the first ten search results for that term during the next six months. Many purists are up in arms about this "rigged" search program. Actually, it's a kinder, gentler form of paid advertising than those bandwidth-wasting banner ads on search result pages; but of course, "preferred listings" won't replace banner ads.

This type of in-line textual advertising will probably yield better results for advertisers than banner ads, too. Many surveys indicate that over half of Webheads surf with graphics turned off to speed page loading, so they miss the banners. Also, banner ads are usually in the margins of a page, while viewers' attention is focused on the center. Finally, surrounding editorial content inclines the viewer to click on a text link

(if the content's as good as ours). See this month's "Dvorak Online" for more on the future of Web advertising.

## HAUPPAUGE'S FULL-SPEED WEB CAMERA BOARD

The NTSC standard for full-motion video is 30 frames per second, which provides the illusion of smooth, natural motion that most Web cameras miss. The ISA Win/Motion60 card captures 640 x480 video frames in real-time at the right speed, in AVI format. The \$595 card requires a Pentium class processor. It uses Motion-MPEG compression and allows frame-by-frame editing. Hauppauge Computer Works: <http://www.hauppauge.com/hcw/html/wm60.htm> or (516)434-1600 voice.

## TELEFINDER 5.1 ADDS DYNAMIC WEB PAGES, MULTI-HOSTING & MORE



Macintosh fans who want a powerful Web/BBS server: meet TeleFinder v5.1. It's the first Mac Internet server to offer "Server Parsed HTML" (SPML), an extended version of Server-Side Includes found in Apache, NCSA and Netscape Unix servers. SPML allows Web pages that selectively adjust content based on the client's browser, computer platform, time of day and other dynamic criteria. SPML can also perform custom logging, include other files in HTML pages and execute CGI scripts. Telefinder 5.1 also supports "virtual hosting" for the first time, allowing custom domain names for each tenant of a Web Presence Provider's server. The BBS module supports TCP/IP, ISDN and dialup modem connections, with error-corrected file transfers, e-mail and TeleFinder's "View by Thumbnail" graphic previewing feature. Version 5.1 is a free upgrade for buyers of versions 4.x and 5.x, or \$95 for upgrades to earlier versions. The list price of \$675 include a two-line BBS, POP3 and Web servers. Spider Island Software: <http://www.spiderisland.com> or (714)453-8095 voice. ♦





Frank X. Sowa is president of The Xavier Group, an international consultancy providing strategic planning, forecasting, training, and development of business and communications systems for organizations since 1981. As a certified software consultant for Softarc's First Class, and a reseller for other companies, he configures customized BBS systems for organizations, complete with "regular content updates." Sowa is also founder and sysop of SEED.NET (412) 487-5449, "the online incubator" for small businesses, a seamless BBS-to-Internet (PPP) provider, with business start-up assistance and seed capital available online. <mailto:franksowa@aol.com>

# CYBERWORLD MONITOR

Frank X. Sowa

## MELTDOWN OR MONOPOLISTIC POWER PLAY?

**P**icture this scenario. You run a small ISP in a major urban center. You begin getting phone calls from disgruntled customers who say it's taking them over 30 hops to get from point to point. You get notification from your upstream connection provider that all of your assigned IP numbers will soon be changed, creating havoc for your customers. The costs of these changes, passed on to your customers, creates a second firestorm. Major customers begin to look for alternative ISPs. Sprint and other major backbone carriers begin advertising their "stable" services as an alternative. You lose your largest customer.

Your system continues to run at a snail's pace — even though you invested in the best equipment you could afford. Losses mount — and you begin to worry about how you're going to put food on the table. You call your regional telco to perform loopback testing to see where the problems are. Your telco tells you that your system is fine — that the problems are all upstream — perhaps even as high as the Sprint network. People are abandoning your ISP business to join Sprint, AT&T and MCI networks — when the actual slowdowns are occurring on their operations. You begin to wonder if something is going on.

### THE NEXT INTERNET MELTDOWN

At least one backbone provider — Sprint — is intentionally turning away small ISP traffic, and others are considering similar moves. Sprint claims that it must "dampen" some externally generated traffic during peak load periods to avert an Internet meltdown on its portion of the Internet. When traffic is turned away, it's like being turned off of the interstate highway — and being forced to take back roads to your destination. When traffic from small ISPs is selectively dampened, it makes you wonder if there isn't some violation of the law taking place. The fact is that trade laws which might have protected you under traditional circumstances don't pertain to the Internet.

Even if they did, the fear of losing the stability of the Internet would probably make regulatory officials look the other way. The Internet is facing a major meltdown sometime by the end of 1996, according to some members of the Internet Engineering Task Force (IETF), the protocol engineering and development arm of the Internet. The IETF warns that today's Internet is on the verge of collapse due to routing protocol implementation problems and increasingly burdensome routing updates.

Essentially, the Internet is on the verge of failing because: 1) The superhighways of the Internet are being backed-up at the intersection traffic lights (the

routers); 2) Cisco routers, which dominate the Internet backbone, are failing to properly handle the peak loads because of inherent protocol handling problems; 3) A lot of needless traffic is duplicated daily on the Net — IP address changes, web site announcements, and router updates; and 4) Many smaller ISPs clog the backbone with announcements of dial-in user router updates.

### LAST YEAR, INTERNET COLLAPSE WAS ALSO IMMINENT

Last year, a similar collapse was imminent. That potential collapse was caused when the NSFNet turned the operation of the Internet over to the private sector, and major changes in routing information caused backbone routers to stop forwarding packets due to overloads in peak hours. Cisco Systems came to the rescue by issuing a temporary fix for their routers (which hold over 85% of the market on the Internet backbone), and by coming up with a new technology called *route dampening*, to reduce the frequency of router updates and maintain router control over updates.

Since then, while no major collapse has materialized, periodic router shutdowns across multiple backbones have been occurring with greater frequency — slowing the Internet to a crawl at times. See: ([www.ietf.cnri.reston.va.](http://www.ietf.cnri.reston.va.)), ([www.internic.com](http://www.internic.com)) and ([www.saic.com](http://www.saic.com)).

### CISCO'S DIRTY LITTLE SECRET AND THE NANOG STUDY

While Cisco Systems is taking the lead in saving the Internet from imminent collapse, and in pushing for IP renumbering and fees that would hurt the smaller ISPs, Cisco seems to be hiding its own dirty laundry. According to an engineering work group report of the *North American Network Operators Group* (NANOG), which includes the Internet's largest commercial network operators, the problems that seem to be occurring on the Internet only happen where Cisco routers are used. NANOG suggests that a manufacturing problem inherent in Cisco routers may actually be at fault. The NANOG traffic study (see <http://www.academ.com/nanog>) found that:

- Instability in Internet traffic is increasing despite use of dampening.
- There is a strong correlation between routing instability and network congestion. Daily incidents suggest that instability peaks occur between 6:00 and 8:00 a.m., and there is an abrupt drop at 5:00 p.m.



- An enormous number of routing update withdrawal announcements are routed each morning. The study found that most such updates are redundant or unnecessary, often done merely to advertise the announced sites or to eliminate performance pressure on specific routers;
- all reported problems, so far, can be traced to Cisco routers and configuration errors.
- Use of non-Cisco routers is discouraged by the largest ISPs, even though other routers do not appear to have the same kind of routing problems.
- A problem that Cisco routers have with the Internet Protocol itself is causing router update oscillation, link/router failures and congestion.
- Cisco routers cannot keep up with processing of the announcements — and rely on dampening technology to continue operating during peak traffic periods.

### SPRINT BLOCKS OUT SMALL ISPs

U.S. Sprint decided to intentionally block certain users' communications that originate from small ISPs as a result of router traffic problems. Sprint says it is being forced to block communications because of overcrowding on its network. MCI and AT&T and the Regional Bells are weighing similar moves. For details see: <http://ftp.sprintlink.net> and <http://nic.merit.edu/mail.archives/html/nanog/threads/html>.

The decision by Sprint to block out part of its routed traffic — electronic mail, file transfers, and visits to World Wide Web sites by users who are passing through Sprint from small ISPs — in a medium where everybody is supposed to be linked to everyone else, is one possible alternative for the future.

Sprint is being applauded by some members of the IETF and by Cisco Systems for being the first ISP to take action to begin to eliminate address crowding. It is estimated that over 10,000 transactions are blocked in the national Sprint network every day, and that in order to keep Sprint's Cisco routers working properly, the number of communications turned back is growing daily.

According to Sean Doran, a Sprint engineer who explained the Sprint filtering process to NANOG:

"Very roughly speaking, the goal (of Sprint's filtering) is that if you have a very long prefix and it flaps a couple times, you can go home for the day..." (Your messages are blocked.)

"At the moment, you are much more likely to be dampened if you are NOT a Sprint customer. That is, the normal values for 'bgp dampening' are in place if you have a customer connection to SprintLink or ICM. However, we will be evaluating the engineering and operational effects of a similar policy with respect to SprintLink customers, as an effort to encourage some of our lazier customers to begin doing their own (IP renumbering) aggregation wherever possible."

According to Sprint, their problems stem from the recent exponential growth of the Internet and the growing number of companies that attempt to do major things with only temporary dial-in connections. Sprint explains that the routing tables of the many linked networks that are passing through Sprint have become too complex for most of its routers to handle. Their chief concern, according to a Sprint spokesman at

the Dallas office, is that things are just going to continue to worsen. Sprint counters its critics by saying that its first and foremost responsibility is to preserve network stability for its own customers.

Most IETF members tend to agree with the Sprint approach. If you are a small ISP, that means trouble.

### PUNITIVE "SOLUTION" POSED FOR SMALL ISPs

Cisco Systems' Yakov Rekhter thinks he also has a solution to the routing collapse problem. He proposed a major overhaul of the routing procedures at the IETF meetings held in Dallas and Los Angeles this spring. The proposal called for IP renumbering according to a hierarchical aggregation scheme in accordance with an IETF proposal made in 1992.

Rekhter's approach is now close to adoption by the *Internet Assigned Numbers Authority* (IANA), the central coordinator for the assignment of unique parameter values for Internet protocols. It would pose little or no hardship for the largest ISPs. In fact, it conserves their address space, even if they aren't using it.

But the proposal makes it harder for new ISPs to obtain address blocks, increasing the likelihood that small service providers will have to face constant IP renumbering. It also shores up the largest ISPs' ability to block out IP addresses. It calls for the "immediate renumbering" of all smaller ISPs and their customers — and would pass on the costs of all renumbering to those smaller ISPs and their customers.

Rekhter also wants IANA to consider charging fees for *any* IP address changes — and for advertising all router updates on the Internet. The proposal does not suggest who should receive the income from these fees.

Rekhter's proposal drew broad support from IETF membership, which is dominated by router vendors and large ISPs. Pushpendra Mohta of CERFnet, for example, believes the best approach is to limit such charges to those ISPs who generate the most changes in router tables — a process known as *flapping*, which tends to bring down routers. The largest backbone providers tend to generate the most flaps because of the extensive traffic they carry. But small ISPs also generate many flaps, because they often advertise the status of temporary dial-up links.

### LARGE PROVIDERS BLAME SMALL ISPs

The large providers single out small inexperienced ISPs as the major cause of problems on the Internet. Some of the more charitable critics suggest that novice ISPs need to be educated on the damages they cause when they advertise to the entire world that a dial-up connection is up or down. Others would like to see the total elimination of small ISPs — or at least their aggregation into a larger ISP's camp.

The traffic problem is causing systemic changes in the Internet architecture that may bode very badly for the future of small ISPs. To eliminate stress on their own router platforms, many of the major backbone ISPs now peer only with providers of a similar size. These moves make it easier for the backbone ISPs to police their own downstream providers by aggregating their traffic and dampening, or delaying disproportionate updates. When dampening occurs, it slows downstream traffic to a crawl until the backlog of updates have been handled by the backbone router. These delays are immediately apparent to customers of the small ISPs — who



often fill the Internet with flames and complaints about the small ISP's inability to provide competent services.

## REKHTER'S PROPOSAL IS ANOTHER INTERNIC FIASCO

As Rekhter put it in his proposal: "There are greedy ISPs and incompetent ISPs. Forcing these ISPs and their users to renumber every time they change service providers — and charging them fees for all the IP changes and router updates will certainly motivate them and their users to lock their organizations into a single provider or face the expensive and complicated task of total network renumbering. The recent change at the INTERNIC on charging for the domain name seems to work. Should the route charging mechanism be similarly done?" Apparently, Rekhter isn't aware of all of the Domain Name filing problems InterNIC is facing.

The problem with Rekhter's notion is that the largest ISPs have large blocks of IP numbers allocated to them, while the small ISPs don't. Large ISPs will often be able to renumber within their network — thus avoiding additional fees. Smaller ISPs will face higher operational costs and start-up costs, creating major barriers to market entry.

## CONSUMERS WILL HAVE FEWER CHOICES

The proposed IP changes will have far-reaching implications. According to Jeffrey Schiller, MIT's network manager, "(When IP renumbering schemes are adopted), users will be locked into their service provider, who can rake them over the coals and jerk them around, and in order to change providers they will have to go through a painful and costly renumbering process." Larger companies will definitely begin to shy away from small ISPs. This will hurt most ISPs' profits — and perhaps run many out of business.

An AT&T study estimated that for an average company of 500 employees, the cost of IP renumbering could exceed \$100,000. Private networks like Silicon Graphics' 150 sites and 7,000 hosts will spend anywhere from \$700,000. to over \$2 million to renumber. Will this create an incentive for users to go directly to the large ISPs rather than risk facing major costs every time a small ISP shops for a better rate, or changes are made by providers upstream?

As if the costs of all these changes on the small ISP won't hurt business enough, the proposals also provide an exemption

for non-profit providers at the expense of the for-profit providers. They call their solution "address lending." Certain addresses will be set aside for institutional non-profits who cannot afford to implement the renumbering process. These addresses, of course, will be maintained on the large ISPs, and part of the fees collected from the for-profit small ISPs will go toward maintaining addresses for the non-profits.

What are the best solutions? IETF has been mulling over this for a few years now with no new alternatives imminent. In any case, they'd like to hear from you — especially if you are an ISP. They are currently soliciting comments on the potential router collapse, and on the Rekhter proposals for charging for IP addressing and router updates. You can make your comments known at <http://www.ietf.cnri.reston.va.us>.

If you are an ISP, immediately explain to your customers what is happening, and what might potentially happen. Ask them what they would appreciate from you to ensure their loyalty remains with you. Consider establishing ISP co-ops with other regional ISPs in your area — and consider joining legal groups and

associations that can help you negotiate better with the large ISPs on the issue of IP renumbering and who will pay.

What is for certain, is that the Internet customer understands even less about how the Internet works than does the small ISP. However, customers are very quick to observe sluggish operations (which as a result of reading this article — some may hopefully see — is not necessarily caused by the small ISP). And, customers are fickle when it comes to having such sluggish services — or being forced to increase renewal rates to offset new costs for operations and fees. IP renumbering and associated fees will provide disparate pricing advantages to the larger ISPs. Even the advantages of small ISP customer service cannot overcome a decision by backbone operators like Sprint to turn back communications. The power is in owning the IP address blocks, and unless you act now to be heard by those who might do something to help you, the fight to build a business on the Internet could abruptly come to a painful end. ♦

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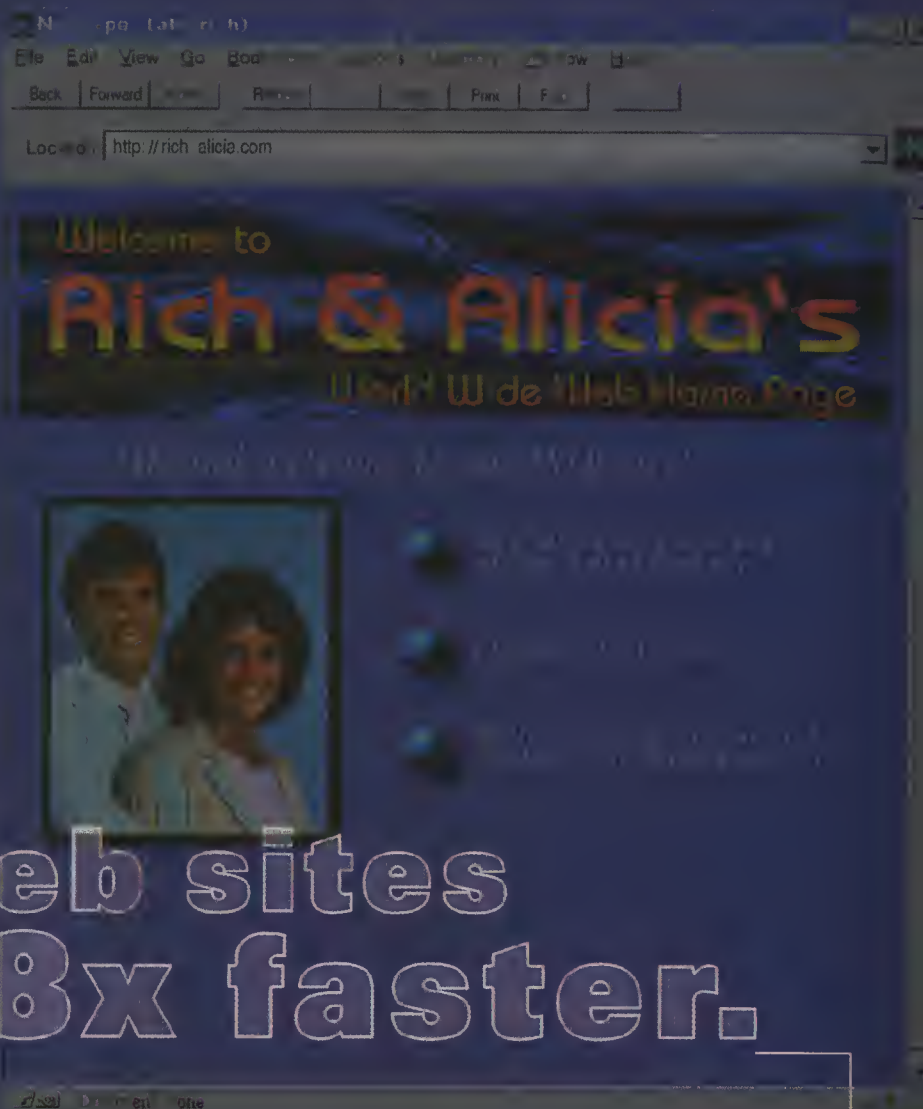
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*What you never thought possible.*



# Java Flavor of the Month

by Steve Graves

## THINKING OBJECT-IVELY

In real life we deal with objects every day: toasters, televisions, beds, clothes. The term object is used to generically identify a physical "thing," and it was from this definition that the term "object" was adapted to apply to "things" within the programming world. If you can take a program (like a browser) and lump its functions and data attributes by purpose, you've created one (or more) objects.

In JavaScript, an object is a way of identifying and controlling a particular piece of the browser, like the client window or an HTML select tag. Among the various JavaScript objects are: *Window*, *Document*, *Navigator*, *History*, *Date*, *Form*, *Anchor*, *Location*, *String*, and *Button*. There are several others, but they all adhere to the overall design of objects.

JavaScript objects logically group both data attributes (called *properties*) and data-manipulation functions (called *methods*). Collectively, properties and methods are called *components*. Accessing an object's components is done by specifying the object and the desired component, separated by a period. For example the following code accesses the *userAgent* property of the *Navigator* object:

```
navigator.userAgent
```

JavaScript objects can be grouped into three categories: (a) objects that deal with the browser, (b) objects that deal with the data displayed by the browser, and (c) objects that help manipulate either category (a) or (b).

The best way to get a feeling for how objects work is to start working with them. Let's take a look at two objects that come in rather handy for starters: *Navigator* and *Document*.

## THE NAVIGATOR OBJECT

The *Navigator* object is one of two that fall into the "browser-manipulation" category (the other being the *Window* object). It provides a collection of properties that store information about the user's browser, specifically:

- **appCodeName**: The browser's "codename" (the name given by the programming team that developed the browser, as in "Mozilla" for Navigator).
- **appName**: The name of the browser (such as "Netscape").

- **appVersion**: The browser's version information (the release number, the operating system, and whether it's the International version or not).
- **userAgent**: This is what the browser sends to the server to identify itself (in the HTTP header), and is equivalent to the *appCodeName* followed by the *appVersion*.

The *appVersion* property comes in handy if you've designed a page that takes advantage of JavaScript features that came out with Navigator 3.0 (which would crash a copy of Navigator 2.0). For example:

*IndexOf()* is a method of a string object. It returns the location of the start of the specified string, or -1 if the string couldn't be found.

### PRESENT DIFFERENT CODE FOR DIFFERENT VERSIONS OF NETSCAPE

```
<SCRIPT LANGUAGE="JavaScript">
<!--
if(navigator.appVersion.IndexOf("3.") != -1) {
  // If IndexOf() returns a value other than -1, then it found '3.' in
  // the version string, meaning we have a browser version 3.x
  ...
  // code for Navigator 3.0 here
} else {
  // code for Navigator 2.0 here
}
// -->
</SCRIPT>
```

The code above is a good way to utilize advanced features and still keep your pages visible to those who aren't using Navigator 3.0. But now that Microsoft has introduced Explorer 3.0, a new problem arises. Internet Explorer doesn't fully implement JavaScript, just enough to cause some serious trouble for the Web designer. Because of this, it's probably a good idea to switch off JavaScript processing for the Explorer user. This can be easily done by using the *appName* property:

### TURN OFF JAVASCRIPT FOR INTERNET EXPLORER USERS

```
<SCRIPT LANGUAGE="JavaScript">
<!--
if(navigator.appName.IndexOf("Netscape") != -1) {
  // code for Netscape Navigator
} else {
  // code for Internet Explorer
}
// -->
</SCRIPT>
```

Additionally, Navigator 3.0 now adds two more properties:

- **mimeTypes**: An array of all MIME types supported by the browser (by helper apps or plug-ins).
- **plugins**: An array of all installed plug-ins for the browser.

The *plugins* property makes it possible to put together web pages that run properly whether the user has installed a particular plugin or not. To utilize this property, you also need to know that any array under JavaScript has at least one property: *length*. The *length* property of an array indicates how many elements the array contains. The next listing is an example function that identifies whether a particular plugin is installed.

Steve Graves is the founder of *Technical News Service Inc.* (T-N-S) and editor of *SysNews.Com*—The Journal of Online Products and Services. His online magazine for sysops and webmaster, includes news articles, editorials, reviews, software guides, and software libraries. As a full time software reviewer, Steve installs, runs, and maintains the BBS and Internet software he reviews. Steve lives and works in Cheverly, Md., about a half mile from Washington, D.C. with his son Brendan, age 10, and his wife, Mary. He authored the *20 minute Chess Master*, one of the first interactive computer books. Steve holds commercial instrument, and instructor pilot certificates and enjoys reading, computers (some days), magic and music. Steve can be reached at [mailto:editor@sysnews.com](mailto:mailto:editor@sysnews.com), <http://www.sysnews.com> or (301) 773-8899 voice (10a.m. to 6p.m. EST M-F).



## TEST FOR AN INSTALLED PLUGIN

```
<SCRIPT LANGUAGE="JavaScript">
<!--
function hasPlugin(strName) {
  if(navigator.appName.indexOf("Netscape") != -1) {
    for(var i = 0; i < navigator.plugins.length; i++) {
      if (navigator.plugins[i].name.indexOf(strName) != -1) {
        return true;
      }
    } else {
      return true;
    }
    return false;
  }
  // -->
</SCRIPT>
```

With this function, you can test for the Shockwave plug-in by calling `hasPlugin("Shockwave")`; from any part of your JavaScript.

## THE DOCUMENT OBJECT

The Document object is part of the "data displayed" category. It encapsulates everything displayed in the client area of the browser (including all other data display objects for a given page. Some of its properties are:

- **location**: The complete URL of the document (such as "`http://www.sysnews.com/index.html`").
- **title**: The text specified by the HTML `<TEXT>` tag.
- **lastmodified**: The date and time the document was last updated or changed.
- **referrer**: The URL the browser came from to get here (and where the user would go if the browser's Back button were clicked).

The next properties are JavaScript equivalents of the attributes of HTML's `<BODY>` tag:

- **bgColor**: The background color.
- **fgColor**: The foreground (text) color.
- **linkColor**: The color of a hypertext link.
- **vlinkColor**: The color of a visited link.
- **alinkColor**: The color of an active link.

Additionally, any other HTML-related object (such as the objects that make up a form) are also properties (or sub-properties) of the document object.

There are several methods associated with the Document object, the most common one being `write()`. The `write()` method allows you to send text directly into the HTML document stream for processing by the browser, just like regular HTML. The text you send can be either displayed text or HTML tags. You can literally build an entire page from within JavaScript using `write()`. For example, the following code would display the traditional "my first program greeting":

```
document.write("Hello World!")
```

This variation would display the same string as a level 1 header:

```
document.write("<H1>Hello World!</H1>")
```

Being able to write HTML out through JavaScript allows you to create anything HTML can handle and make it only available to those with a JavaScript browser. For instance, the following code would display the message "Ahhh ... you're a JavaScript user! For you, I have a special link" only to Navigator or Explorer users.

```
<SCRIPT LANGUAGE="JavaScript">
<!--
document.write("Ahhh ... you're a <!--JavaScript-->
user!");
document.write("For you, I have a <A HREF='jsen
abled.html'>special link</A>.");
// -->
</SCRIPT>
```

Notice that the `HREF=` attribute above uses single quote marks. Because with normal HTML you would enclose the filename in quotes, you need to make sure the quotes make it to the browser (and aren't interpreted by JavaScript itself). To do that, we use single quotes inside double-quoted strings.

Alternatively, we could have used a special escape character, the backslash:

```
document.write("For you, I have a <A HREF='jsen
abled.html'>special link</A>.");
```

The backslash is a special character that instructs JavaScript to take the next character literally instead of trying to process it. This comes in very handy when you have to specify a URL and you want to use backslashes in directory names (for those dyslexic DOS users):

```
document.write("This link is in a <A HREF='subdirecto
ry\jsenabled.html'>sub directory</A>.");
```

Properties wouldn't amount to much if all we did was read them. We also should be able to change them, and several Document properties do allow this, specifically the various color controls. With these little nifties, you can dynamically change any color on your page just by reassigning the appropriate property:

```
document.bgColor = "#0000F0"
```

The preceding code would set the background color of your page to medium blue. You can specify colors either as a "hex triple" (two hex digits for each of the three primary colors: red, green, blue), or as one of the predefined color strings: Black, Olive, Teal, Red, Blue, Maroon, Navy, Gray, Lime, Fuchsia, White, Green, Purple, Silver, Yellow and Aqua. So, another way of saying the above would be:

```
document.bgColor = "blue"
```



# JavaScript of the Month

Each month I will pick and analyze a JavaScript that meets three criteria. 1. It must demonstrate JavaScript's power and flexibility. 2. It must be freely available to Webmasters. 3. The application must be unique, practicable, cool, or otherwise of value to the online community. If you have written such a script or know of one, please e-mail Steve Graves at <mailto:editor@sysnews.com>.

## Automatic Sponsor Rotator

Scott J. Walter fixed some problems we found with the original script to make it less site specific; it has been truncated here to meet space requirements. The entire script can be captured from <http://www.sysnews.com/centers/java/java.html>.

### "PARENT" DOCUMENT ("JFSPR.HTM") USED TO PRODUCE FRAMES

```
<HTML>
<HEAD><TITLE>Timed Sponsor Rotator</TITLE></HEAD>
<!-- This script uses a special kind of object type called an "Array" to build a database of images. The jfspo.htm files uses the database when rotating the various sponsors. It could have also been located in the parent of this parent, if your site is so structured. -->
```

```
<FORM NAME="database">
<INPUT TYPE='hidden' NAME='tb'
VALUE='<TABLE BORDER=0>
<TR><TD>
Sponsored by: <A HREF="http://~"
TARGET="top">~.</A>~
</TD><TD>
<A HREF="http://~"
TARGET="top">
<IMG SRC="~"HEIGHT=72 WIDTH=340
BORDER=0 ALT="~ Image"></A></TD>
```

```
<TR></TABLE>~ '>
<!-- The following has been broken up for ease of viewing. However, your script will be one great big line. The ~ identifies the end of a record field. The * identifies the end of a record. Following is an example of two records with four fields per record. Each record represents one banner.
```

Field one contains the url to the banner link.  
Field two contains the url of the banner graphic.  
Field three contains the company name.  
Field four displays the company slogan.

You can add as many records as you wish. —>

```
<INPUT TYPE='hidden' NAME='db'

VALUE="www.infohiway.com/bigmouthlion/~
g/s2.gif~
Big Mouth Lion~
Webware Forum Manager.~*"

www.infohiway.com/webwalker~
g/webw.gif~WebWalker Virtual Press~
Freeware and shareware novels on-line!~*">
```

```
</FORM>
```

```
<!-- Adjust the size of the two panes by changing the 78 below to whatever number of pixels height you desire for the bottom pane. The "*" is a wildcard that simply tells Netscape to use whatever is left for the top pane -->
```

```
<FRAMESET ROWS="*,78">
```

```
<!-- The first line below needs the name of the HTML document you wish displayed in the top pane. The second needs the name of the HTML document you use for the rotation of sponsors or other content. -->
```



```
<FRAME SRC="jdisp.htm" SCROLLING="yes" NAME="main">

<FRAME SRC="jfspo.htm" SCROLLING="no" NAME="sponsor"
MARGINWIDTH="3" MARGINHEIGHT="1" NORESIZE>

</FRAMESET>

</HTML>
```

#### "FIRST CHILD" DOCUMENT ("JDISP.HTM")

<!-- This is the "main" document used to display content (named "jdisp.htm" in our example) -->

```
<HTML>
<HEAD><BODY BGCOLOR="#FFFFFF">
<CENTER>
<!-- Add TARGET="_top" to your hyper references when
departing from a frames document, otherwise the target
document will be displayed in the top frame.
```

Web content goes here. -->

```
<P>

</BODY>

</HTML>
```

#### SECOND CHILD DOCUMENT (NAMED JFSP0.HTM):

<!-- This is the sponsor document to display content content (named "jfspo.htm" in our example -->

```
<HTML>
<HEAD>
<!-- The refresh has been set to 60 seconds. You can make
it as long or as short as you wish. -->
```

```
<META HTTP-EQUIV="Refresh" CONTENT=60>
<SCRIPT LANGUAGE="JavaScript">
<!-- Hide JavaScript from Java-Impaired Browsers
/* Routine to rotate sponsors. You might prefer arrays to the
strings used here, but then, again, you might ask yourself,
"Why didn't they?" You may wish to refer to our pages dis-
cussing the building of an amorphous database. */
```

```
function makeArray(iLen) {
  this.length = parseInt(iLen);
  for (var i=1; i<=this.length; i++) {
    this[i] = null;
  }
  return this;
}var table = new makeArray(7)
;var sponsors = new makeArray()
;var di = new makeArray(4)
;var numSponsors = 0;
```

```
// parse the sponsors
//
```

```
temp = parent.document.database.db.value;
```

```
i = 1;
```

```
while(temp.indexOf("**") > 0) {
  pos = temp.indexOf("**");
  sponsors[i] = temp.substring(0, pos);
  temp = temp.substring(pos + 1, temp.length); numSponsors = i;
  i = parseInt(i) + 1;
}
```

```
// parse the HTML TABLE definition
```

```
temp = parent.document.database.tb.value;
for (var i=1; i<=table.length; i++) {
  pos = temp.indexOf("~");
  table[i] = temp.substring(0, pos);
  temp = temp.substring(pos + 1, temp.length);
}
```

```
// Generate a random number
```

```
function srand() {
  today = new Date();
  picker = "a" + today.getTime();
  return parseInt(picker.charAt((picker.length - 4))) + 1;
}
```

```
function getSponsor(iWhich) {
```

```
  if(iWhich<1 || iWhich>parseInt(numSponsors)) {
    iWhich = 1;
```

```
  }
```

```
  split = sponsors[iWhich];
  iWhich++;
```

```
  for(var i=1; i<=di.length; i++) {
```

```
    pos = split.indexOf("~");
    di[i] = split.substring(0, pos);
    split = split.substring(pos+1, split.length);
```

```
  }
```

```
  document.write(table[1] + di[1] + table[2] + di[3] +
```

```
    table[3] + di[4] + table[4] + di[1] +
    table[5] + di[2] + table[6] + di[3] +
    table[7]);
```

```
}
```

```
// -->
```

```
</SCRIPT>
</HEAD>
```

```
<BODY BGCOLOR=#FFFFFF>
```

```
<SCRIPT LANGUAGE="JavaScript">
```

```
<!-- Hide JavaScript from Java-Impaired Browsers
```

```
  getSponsor(srand());
```

```
// End Hiding -->
```

```
</SCRIPT>
</BODY>
</HTML>
```

Nominate your favorite JavaScript. Each month Steve Graves will pick and analyze a JavaScript that meets three criteria. 1. It must demonstrate JavaScripts power and flexibility. 2. It must be freely available to Web-Masters. 3. The application must be unique, practical, cool, or otherwise of value to the online community. If you have written such a script or know of one, please E-mail Steve at <mailto:editor@sysnews.com>. Better yet, post your nomination to the JavaScript conference at <http://www.sysnews.com/centers/java/java.html>. ♦



# Notes From The Underground by Wallace Wang

## CENSORSHIP: COMING TO A NEIGHBORHOOD NEAR YOU

In case you haven't been reading the newspapers, browsing the World Wide Web, or watching TV lately, censorship is alive and well throughout the world, including the United States. China represents the extreme case, where the government has turned its back on the Internet and started its own national "intranet." Instead of providing access to the rest of the world, the Chinese Internet will only contain information officially sanctioned by the Chinese government. All citizens may freely access the Chinese Internet, thereby giving them the illusion of freedom, but no one from the outside world can access the Chinese Internet and poison it with foreign ideas about freedom, democracy, or honesty.

Of course the Chinese government isn't the only country obsessed with shutting down the exchange of information. North Korea monitors citizens with Internet access and the good ol' United States still has its supporters backing the Communications Decency Act, which seeks to block undesirable information (whichever definition may be convenient at the time) under the guise of protecting children.

While we may protest the obvious efforts at censorship, it's much harder to rebel against subtler forms of censorship. Like the Chinese people, who may believe that the information found on the Chinese Internet is "the whole story," many people form opinions based on the information they receive from newspapers, television shows, and radio broadcasts. But how many people ever question whether the information they receive from these sources is entirely accurate, objective, and complete?

Censorship doesn't always mean actively blocking information. Sometimes it can mean just ignoring facts altogether. If you don't know something exists, then you won't be able to rebel against it.

That's the idea behind *Project: Censored* (<http://www.cs.sonoma.edu/projectcensored>), an orga-

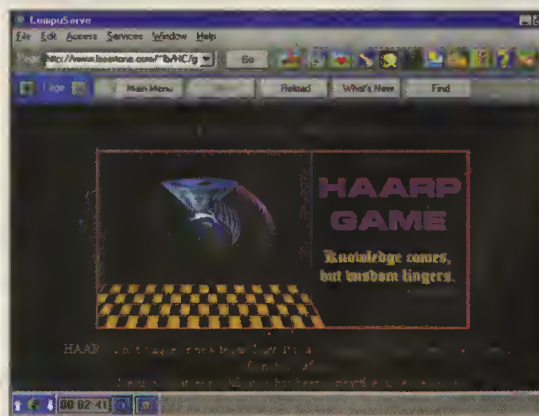
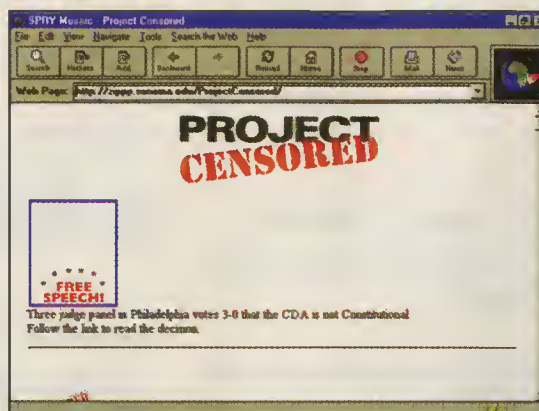
nization devoted to publicizing little known or ignored stories of national and international importance. Launched in 1976, Project Censored seeks to determine if the traditional media (ABC, CNN, The New York Times, etc.) systematically omit coverage of crucial issues in favor of "junk food" stories that have no effect or relationship to more pressing matters such as health care, environmental protection, or political scandals.

In retrospect, "junk food" stories are obvious, but the media still devotes much time, effort, and money reporting such non-essential news stories as the O. J. Simpson murder trial, the failed marriage of Tonya Harding, the British Royal Family's sexual affairs, or the appearance of John Wayne Bobbitt in an X-rated movie.

By comparison, not many people know about the existence of the *Council for National Policy* (CNP), which consists of an elite group of administration officials, congressmen, industrialists, and conservative Christians including Jerry Falwell of the Liberty Alliance, Oliver North, Senator Jesse Helms, Richard Shoff (former leader of the Ku Klux Klan in Indiana), former attorney general Edwin Meese, Paul Weyrich (founding president of the Heritage Foundation, a right-wing think tank), and R.J. Rushdoony (a leader of the Christian Reconstruction movement).

CNP member Paul Weyrich once proposed that the Republicans include a plank in their 1988 platform that AIDS be controlled by "reintroducing and enforcing anti-sodomy laws." Rushdoony went so far as to argue that right-thinking Christians should take "dominion" over the United States and do away with the "heresy" that is democracy.

The CNP reportedly meets quarterly behind closed doors and is so secretive that the organization's Washington office will neither confirm nor deny where, or even if, the group meets. While the mem-

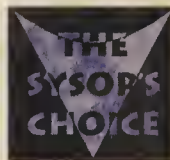


Wallace Wang is the author of *CompuServe For Dummies*, *Procomm Plus for Dummies* and *Visual Basic for Dummies* (all published by IDG Books) as well as *Surfing The Microsoft Network*, published by Prentice-Hall. He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672@compuserve.com or bothehat@aol.com or bo\_the\_cat@msn.com





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bers have the right to meet and discuss their ideas freely, it would be nice if our national media kept a closer watch on their activities to make sure that they aren't subverting our laws for their own agenda. Considering that some of the most powerful men in Washington, D.C. belong to the CNP and that the organization sounds like it would love to see a dictator of their choosing take over the United States, coverage of the CNP seems infinitely more important than another update on how Eric and Lyle Menendez are faring in prison.

Then there's the Pentagon's High Frequency Active Auroral Research Project (HAARP). According to the Pentagon's official press releases (<http://server5550.itd.nrl.navy.mil/projects/haarp>), HAARP is nothing more than a series of experiments to study the ionosphere. But according to HAARP's many critics (<http://www.lasertone.com/~1b/HC/game.html>), the project's real goal is to direct a 2.8-10 megahertz electromagnetic energy beam to burn a "hole" in the ionosphere, demonstrating the potential to control ionosphere processes for military objectives. In other words, using weather as a weapon.

HAARP may have unknown environmental effects. Punching holes in the ionosphere sounds like an experiment that, if the Pentagon's calculations are wrong, could spell disastrous consequences for the entire planet. But let's not worry about that when we can read another story about Pamela Anderson Lee giving birth to her first child instead.

Why should anyone care how much money the Pentagon spends when there are billions of dollars already missing from the savings & loan crisis? Fortunately, since 1990, the U.S. government has operated a financial database created by the **Financial Crimes Enforcement Network** (FinCEN), whose stated purpose is "to provide a government-wide, multi-source intelligence and analytical network to support law enforcement and regulatory agencies in the detection, investigation and prosecution of financial crimes."

Sounds good so far. FinCEN sports a staff of 200, a budget of \$20 million, and has already caught international drug dealers, Russian spy Aldrich Ames, and Islamic extremists convicted of bombing the World Trade Center. So while the total cost of the savings & loan scandal could reach as high as \$1.4 trillion, a crime that American taxpayers will be paying for well into the next century, the Treasury Department has decided not to use FinCEN's databases to track down the missing millions from the Savings & Loan crimes.

Why not? Surely it couldn't be because former President George Bush and former U. S. Treasury Secretary Lloyd Bentsen both had sons who got rich through the savings & loan scandal. But whatever the reason, the American public can rest assured that the government is doing whatever they can to solve this problem without the resources of FinCEN.

Fortunately, American corporations can help shoulder their share of the inevitable tax burden by employing child labor to

reduce their costs. Although the publicity surrounding Kathy Lee Gifford has highlighted the problems of child labor in sweat shops in Honduras, child labor isn't exclusive to Third World countries alone.

Between 1980 and 1989, the National Institute of Occupational Safety and Health (NIOSH) reported that 670 American youths, aged 16 to 17, were killed on the job. A second NIOSH report found that more than 64,100 children went to the emergency room for work-related injuries in 1992. Seventy percent of these deaths and injuries involved violations of state labor laws and the Fair Labor Standards Act (FLSA), the federal law which prohibits youths under 18 from working in hazardous occupations.

"Child labor today is at a point where violations are greater than at any point during the 1930s," said Jeffrey Newman of the National Child Labor Committee, an advocacy group founded in 1904.

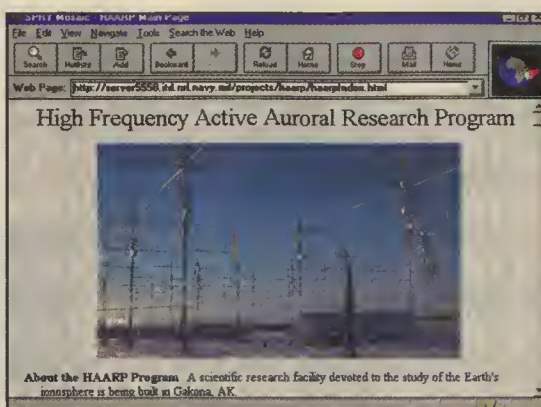
Should businesses employing child workers be worried? Not according to the NIOSH, because child labor laws are rarely enforced. One report found that the average business could expect to be inspected once every 50 years or so with inspectors spending less than five percent of their time looking into child labor problems.

According to Project Censored, lobbying efforts by various business trade organizations are making congressional reform nearly impossible. The National Restaurant Association (NRA) and the Food Marketing Institute (FMI) (both heavy employers of underage workers) contribute generously to potential supporters of their agenda. The restaurant industry alone has given \$1.3 million to Republican candi-

dates in recent years with House Speaker Newt Gingrich receiving more than \$27,000 since 1991.

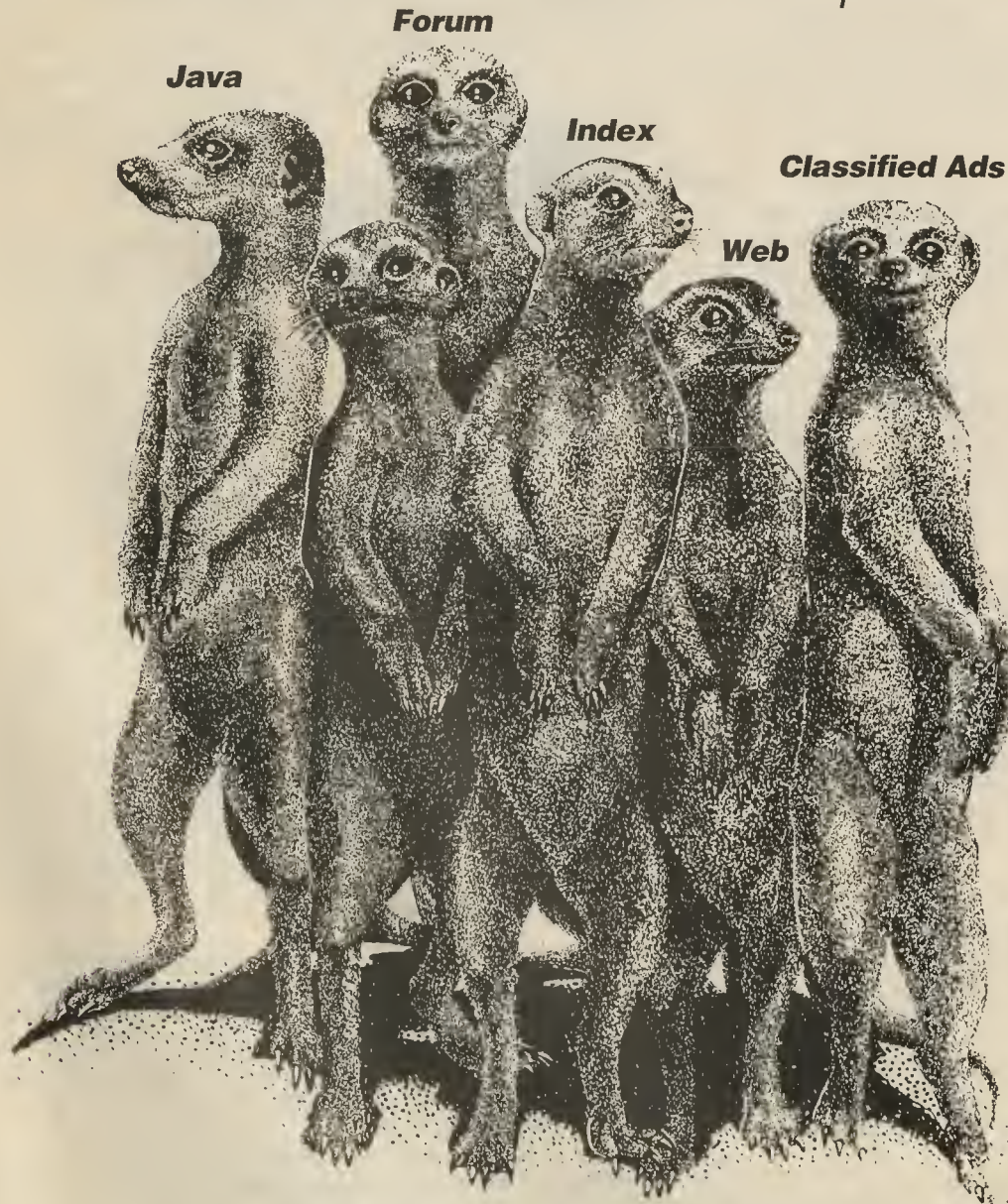
But don't think about these problems. Just sit back, relax, and turn on that TV. No need to clutter your mind with worthless stories from The Weekly World News about space aliens abducting Elvis or NASA photographs depicting World War Two bombers stranded on the moon. You can just clutter your mind with worthless stories from Time Magazine, Newsweek, CNN, CBS, and your favorite local newspaper instead.

If you would rather be "entertained" than informed, the media will happily feed you "junk food" stories showing Computer City outlets selling the first Windows 95 packages one minute after midnight or Michael Jackson's latest escapades with another ten year old child. But if you demand more from the media, visit Project: Censored or Project: Censored Canada (<http://cc6140mac.comm.sfu.ca>). After reading the news from Project: Censored, you may never look at your ordinary newspaper with the same respect again. ♦





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# THE SOUND OF THE INTERNET

Voice/Video On The Net

by Jeff Pulver

## FCC CHAIRMAN REJECTS RESTRAINTS ON VON

At the INET '96 Conference in Montreal, Blair Levin, speaking on behalf of FCC Chairman Reed commented that:

"...the right answer at this time is not to place restrictions on software providers... or to subject Internet Telephony to the same rules that apply to conventional circuit-switched voice carriers"

After reviewing Reed Hundt's entire speech (<http://www.fcc.gov/Speeches/Hundt/spreh629.txt>) it seems to me that Chairman Hundt agrees with the majority of the points raised in the VON Coalition lead Joint Filing of Reply Comments dated June 10th, 1996. The complete text of our June 10th Reply Comments can be found at <http://www.von.org/reply.html>

While it will take a full vote of all of the FCC Commissioners, I feel that VON has won the first round of the battle, at least for now. While the VON Coalition will need to keep a watchful eye on the Neo-Luddites of ACTA, our focus begins to shift toward innovative uses of these products and standards.

I recently decided spend my full time on VON technologies. I'm now the Internet Analyst at Pulver.com. By now my book, *Internet Telephone Toolkit*, published by John Wiley & Sons, should be available. The CD-ROM accompanying the book contains many of the popular VON products which have been mentioned in this column, including *Net2Phone*. (see below).

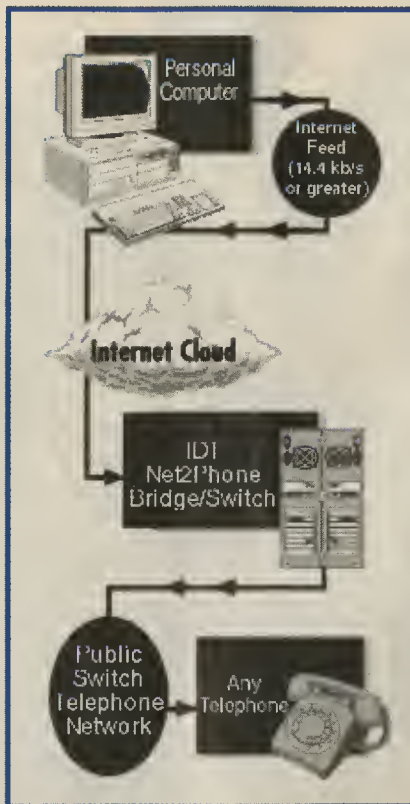
September is also the time for the *Talking Net Conference* — September 10th and 11th in New York City. Speakers from Netscape, Microsoft, Intel, IBM, VocalTec, Voxware, MCI, The FCC, ACTA, VON Coalition, Cornell University, Micom and Bear Sterns will debate the future of the VON industry. Please visit the Talking Net website for more information - <http://www.talking-net.com>.

## NEW VON TECHNOLOGIES

IDT Corp. recently announced their Net2Phone product (see <http://www.net2phone.com>), which provides international callback long-distance service over the Internet. Later this year, for around US \$30 a month, can make toll free calls to the United

States from overseas. Considering that it is usually impossible to place toll free calls into the States, this may be a service many people start to use.

Intel and Microsoft recently signed cross-licensing agreements for communications technology and interoperability across the Internet. The agreements make it possible for millions of people to easily place multimedia voice, video and data conferencing calls over the Internet. The key challenges have been making it easy to find the person you want to talk to and setting a standard set of protocols so that different VON products can communicate with each other. To ensure universal interoperability for voice and video calls, Intel has provided Microsoft with its implementation of the H.323, RSVP and RTP standards created for its Proshare line of video conferencing products. Microsoft has provided Intel with its T.120 implementation, the ActiveX conferencing platform and NetMeeting.



**Net2Phone: With Just Your Phone**

"By aggressively supporting standards-based communications along with Intel and others in the industry, we are making great strides to meld the power of the PC with the global reach of the Internet" said John Ludwig, vice president of the Internet Platform and Tools division at Microsoft.

Because of this deal, Windows 95 software developers need to just make a few additional function calls and the application which they are developing will be H.323 and T.120 compliant. By adding core H.323 and T.120 functionality to the Windows95 and Win NT operating systems, Microsoft has provided a simple path for all of its independent software vendors to follow when they want to develop conferencing tools which can interoperate with others.

Jeff lives in Great Neck, New York (although one could argue he really lives on the net and sleeps in his home in Great Neck). These days Jeff is a self-proclaimed "Net Technologist" and publisher of *NetWatch* (<http://www.pulver.com/netwatch>), a web magazine which tracks enabling net technologies with a specific focus on audio, video, marketing and services on the net. He is also the project manager of the Free World Dialup experiment (<http://www.pulver.com/fwd>), and the moderator of several mailing lists including: *VON*, *NetWatch* and *IPhone*.

You can e-mail Jeff at <mailto:jeff@pulver.com>



## VON PRODUCT OF THE MONTH - INTEL INTERNET PHONE

Intel recently shook the Internet telephony marketplace. The Intel Internet Phone is available for download from <http://www.intel.com/iaweb/cpc>

The Intel Internet Phone requires over 20MB of disk space as well as a P100 or faster, Win95, not to mention a minimum of 16MB of RAM.

While support has been announced by leading Internet directory services, such as Four11, Banyan's Switchboard.Com, WhoWhere, DoubleClick, and BigFoot, I didn't find that it was easy to locate and call other users of the H.323-based Intel Internet Phones. The only way I was able to try out the product was to schedule appointments via e-mail and publish my static IP address.

Once I connected with somebody, I was very impressed with the audio quality of the product. Of all of the twenty plus VON products I've tested, the audio gets an "A." The quality of the audio was consistent across several the conversations which I had with others.

Many of the other VON products provide a real-time directory which lists all of the people available to communicate at a given moment. The approach many of the white page vendors initially took was to list whomever wanted to be listed, whether or not they were available over the Internet at that moment. While this implementation more resembles how conventional telco based directory assistance works, it may take a while to get used to.

It took Microsoft and Intel getting together to force the issue, but this will be the year which some of the Internet Telephony vendors - each with their own motivations - will provide their customers with the ability to interoperate with other vendor's products.

The point with Intel's Internet Phone wasn't the fact that Intel had developed a product like their Intel Internet Phone

H.323/T.120 is not the only standard being promoted. Netscape's LiveMedia is also there. In fact, after visiting Netscape's suit at the Spring Internet World Show in San Jose, I was convinced that Netscape was ahead of the game. After all, after seeing CoolTalk converse with TeleVox and an unannounced VON product from Apple — it was pretty impressive. But just went it appeared that Netscape had the momentum with LiveMedia, Intel and Microsoft get together and deliver on the standards issue.

Andy Grove and Bill Gates working together on the same team. Some people may not feel comfortable with this. After all, one might ask "What's in it for them to cooperate?". The answer is plenty. More units of Windows95...more Pentium processors sold.

It's exciting to have Intel and Microsoft enter into the Internet Telephone space, and I'm excited that they have used stan-

dards to help solve two fundamental problems: how to find people on the Internet, and how to get connected with them using standards-based communication technology.

But what steps are needed to get companies like VocalTec and Netspeak to not only support H.323 but to embrace it and to deliver a product in the very near future which is compatible? Hopefully these companies will deliver on their promised support to these standards sooner rather than later.

The balance of power within the Internet Telephony marketplace first started to shift earlier this year when Netscape purchased Insoft, and announced their plans to incorporate CoolTalk within Netscape Navigator 3. Then IBM announced their ICPPhone product, Microsoft announced NetMeeting and now Intel announces and delivers the Intel Internet Phone. Each of these companies are providing their Internet telephony software product to the marketplace for free.

My guess is that before the end of 1996 Quarterdeck start to give WebTalk away for free — if it is still on the marketplace at all. Maybe FreeTel communications had it right all

### Intel Internet Phone

along by giving away their product for free...with the explicit hope of getting advertising revenue.

#### Intel Internet Phone - Interoperability at Last

While these products may not be as feature rich (yet) as some of the commercial Internet telephony software products, what's better than free?

I'm sure the commercial vendors believe they have the answer...at least I hope they do. Products like Internet Phone and WebPhone at this point are second generation Internet telephony software products, while the offerings from the gang of four is significant, since they are not "for sale" some companies may stay away from them and opt for products which they can purchase off the shelf from their local computer store.

In my upcoming "Internet Telephony Market Research Report" - published by Pulver Reports - one of the points I raise is the fact that these days there is no brand loyalty amongst Internet telephony users. I believe Intel's addition to the marketplace will make this a certain fact.

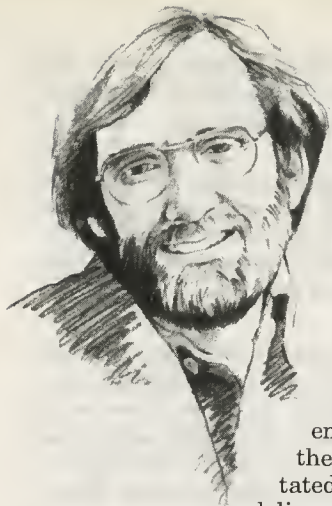
A couple of the related market segments which appears to be doing well are the developers of codecs and the some of the companies which sell to the accessory marketplace like: Jabra Corporation (<http://www.jabra.com>), Andrea Electronics (voice (718)729-8500), and InterActive Inc. (<http://www.iact.com/sxc.html>)

Once standards are in place and other companies start using H.323 as well, I believe that there will be a lot of more people using Internet Telephony for fun activities such as playing the multiplayer Internet Games from companies like Virgin Interactive and Sierra On-Line, in addition to those who use it for business or within their personal calling circles.

Interoperability standards really are critical to the long-term growth of Internet Telephony and related VON technologies. ♦







# EDUCATION LINK

by Rea Andrew Redd

## "MY HAND AND ARM ARE PARALYZED!" OR "AND NOW A WORD ABOUT OUR FUTURE"

It is either "Yes! No notes today!" or "Do we have to copy all of that?" Students enter the room, look at the chalkboard and the next forty minutes of their lives are dictated to them. In many classrooms, information delivery is mainly accomplished by faculty reading and telling stories from their notes while the students furiously scribble in note books. In some electronic classrooms, the instructor's computerized graphics are scrolled up onto a projection screen and then typed into laptop computers by students.

Norman Wagner in "Telecommunications and the Changing Nature of Instructional Delivery" (*Syllabus*, June 1996) is looking for a new instructional model that includes lectures, but only when they are used to introduce topics and inspire motivation. In the future he sees instruction becoming more time-and-place independent, with a huge jump in the numbers of part-time students. He cites the University of Arizona (UA) as an example; its School of Library Science has established a Master of Library Science program via distance learning. Students receive videotapes and then become involved in class discussions via the Internet.

The insular educational institution and its formalized degree programs are headed the way of dinosaurs. Wagner sees colleges and even some high schools focusing on smaller units of knowledge and skills; these units will be spliced together to make individually tailored degree programs. Partnerships between schools and employers will increase.

Free Internet services for students and faculty are also marked for extinction. California colleges are now charging students and faculty for Internet access. Howard Bryant, in a feature story reported by the *San Jose Mercury News*, revealed that demand for Internet access has outstripped many schools' ability to provide it. Telecommunications fees ranging from \$10 to \$13 per month for 165 hours of service are being imposed on faculty and students.

Some administrators justify the fees by questioning whether the Internet is used as an education resource or an entertainment medium. Don Wood, executive vice president of Metricom, a San Jose wireless Internet provider, says, "Should we provide cable TV to the dorms? There probably are some interesting educational shows on PBS, but schools probably don't want to get into the habit of paying for 'Seinfeld.' The Internet is moving in the same entertainment direction." It's no longer the slow, text/research tool, states Bryant, but it is "awash with corporate billboards, slick with seductive content of the WWW and surrounded by prospectors salivating at the thought of electronic commerce." Pointing up this fact is a recent article in *T3*.

*T3: Television, Technology and Teaching*, a magazine produced by CNN and Turner Educational Services, Inc., offers these predictions in a recent article entitled "What's Ahead on the Internet? Catching the Next Wave." About 60 million people have access to the Internet; 4.4 million households have a modem; 2.3 million have used the WWW in the past month; every day, about 150 new businesses come onto the Net, which already has about 40,000 businesses; 3,000 schools have Web pages. Prediction: Quality of services and the electronic "have/have not gap" will increase.

Using the Internet to enhance learning has become less and less difficult. Prediction: Electronic Mail will become a part of the curriculum in both English and Social Studies. Online curriculum and the Web will merge with Electronic Adventure Learning, which are broad, integrated units, the objectives of which will be research, writing, math and the social sciences. One of the best examples of this is America Online's "Taking Stock" electronic curriculum, which focuses on Wall Street investments. Electronic Scavenger Hunts, focusing on the validity and reliability of sources, will be the entry level assignment in many classrooms. HTML will become a standard learning objective in the elementary school.

After the WWW, the next frontier will be Virtual Reality. Prediction: the next wave of browser technologies on the Net will soon bring navigable and interactive 3D images to the classroom. If you don't believe this prediction then visit <http://www.sgi.com/Products/Webforce/WebSpace>. Also, on-screen animation is right around the corner.

For Norman Wagner's article from the June 1996 *Syllabus*, voice call (800)773-0670 or visit <http://www.syllabus.com>. For a reprint of *T3*'s article call (800)344-6219; for a sample issue call (800)216-2225. For Howard Bryant's article, "California Colleges Charge..." visit <http://www.sjmercury.com>

## FAQ: RESEARCH CITATIONS FROM THE NET AND WEB

A fair portion of my e-mail concerns research and proper citations of Internet and WWW sources. *Using the Internet, Online Services, and CD-ROMs for Writing Research and Term Papers* will probably become one of the standard references for academic writing. Teachers will appreciate this book because it starts with the student's handling of secondary research in traditional print sources and then proceeds to deal with electronic sources.

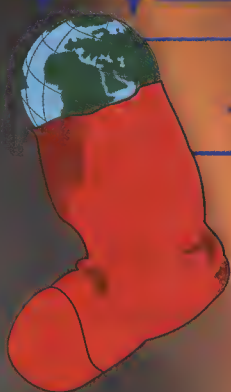
Reference works on CD-ROM are introduced and the basics of a search are shown. Though the chapter is not comprehensive, it is enough to get a student point-

Rea Andrew Redd lives and works in southwestern Pennsylvania where he manages a high school library, teaches European history and Scholastic Achievement Test preparation. On occasion, he reenacts American Civil War battles with the Ninth Pennsylvania Reserves, an historic, military impression unit. E-mail Rea at: [redde@genesis.duq.edu](mailto:redde@genesis.duq.edu)



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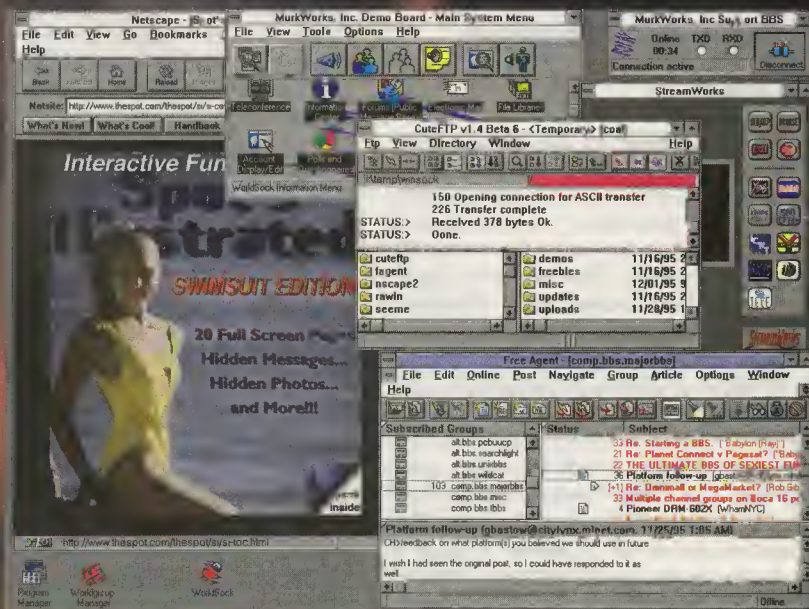
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ed in the right direction. Prodigy, America Online, CompuServe, Dialog and Lexis/Nexis are adequately covered in the chapter on secondary research using online services. The Internet and the Web are presented in to-the-point language, with sample gopher directories and web pages. Throughout this section, acronyms are explained and vocabulary is defined.

Reliability is a special concern with Internet resources. This issue is handled well; questions that the student should ask of the source to test its reliability are stated and explained. Such standard topics as note taking, organization and writing are covered. The work concludes with proofreading and preparing the final copy. The last chapter deals with the citation of sources with particular attention to electronic information.

The retail price of this book is **\$29.95**; for more information send fatmail to Neal Schuman Publishers, 100 Varick Street, New York, NY 10013. **(212)925-8650** voice or **(800)584-2414** fax.

## OUT OF THE E-MAIL BAG

Gerald Ollison (<mailto:ambronnt@buck.edu>) is looking for educators associated with the American Field Service, a student exchange program, or associated with high school education who wish to investigate the possibilities of a curriculum that emphasizes electronic seminars with Central European high school students and faculty. Ollison is also seeking grant writers to work with former Soviet citizens who are preparing proposals for the funding of electronic learning. Contact Gerald Ollison at 203 Orchard, #2, Langhorne, PA 19047, **(215)752-0305**.

## THE COLLEGIATE BROWSER

### *Biased Judges*

If you are interested in the criminal justice system, a new software application designed by Tufts and Northwestern Universities provides a multimedia approach to studying court room conditions and outcomes. The software application, entitled *Crime and Punishment*, is a courtroom with digitized video of actors playing the roles of prosecutor, defense attorney, defendant, and victim. Six cases range from sexual assault on a minor to grand larceny shoplifting. Students, who play the judge, can study themselves for bias within the general group of players. The simulation involves students taking a seat on the bench and judging a case in which the instructor can manipulate case characteristics including the defendants' race, gender, appearance or man-

ner of speaking. This CD-ROM application runs on a Power Macintosh or Windows PC. A WWW version may be online by early 1997; contact Professor Kent Portney, of the Political Science Department, Tufts University: <mailto:kportney@pearl.tufts.edu>.

### *Delaware Goes The Distance*

At the University of Delaware, 28 departments have produced 100 distance learning courses, two degree programs, and over 1,700 enrollments in 12 states. Video, cable, satellite, compressed video, interactive television and the Internet are used by more than 10 per cent of the university's faculty. Delaware's Colleges of Nursing, Arts and Sciences, Engineering and Human Resources, the Media Services, and the Division of Continuing Education electronically offer courses leading to degrees.

Two-way interactive classrooms have been established in Georgetown, Newark, and Lewes, and videotape courses are delivered to the Mind Extension University cable-TV channel. Classes, seminars and conferences are also available to students at private sector work sites, public facilities and meeting rooms. Contact Dr. Richard Fischer, associate provost of Continuing and Distance Education by e-mail (<mailto:Richard.Fischer@mvs.udel.edu>) or **(302)831-2795**.

### *Collegiate Math*

For an interesting paper on the origins of algebra, its historical development, and its correlation to computing visit <http://www.comlab.ox.ac.uk.oucl/users/jonathan.bowen/algebra.html>. You'll find tables, formulas, identities, series which illustrate a classroom concept at <http://www.sisweb.com/math/tables.html>. Graphics for the Calculus Classroom provides animations and graphics for calculus problems which includes the basics and such items as the volume of water in a tipped container; go to <http://www.math.psu.edu/dna/graphics.html> for these classroom illustrations.

What's *fractal geometry*? Go to <http://www.ncsa.uiuc.edu/Edu/Fractal/Fractal-Home.html> for a Web page devoted to integrating fractal geometry in the college classroom using a fractal microscope program that can be downloaded. You will find a graphical exploration of the Mandelbrot set with a full gallery of fractal designs at <http://www.softlab.ntua.gr/mandel/mandel1.html>. College level geometry students can explore advanced concepts at the Gallery of Interactive Geometry located at <http://www.geom.umn.edu/apps/gallery.html>. The Geometry

Center has interactive applications, a visual archive, formulas, electronic journals, and just about whatever else you need to teach geometry; visit <http://freeabel.geom.unm.edu>.

### *Math Reference*

Can a graph be graceful? Can a number be amicable? Of course, they can! Look it up in the online Mathematics Dictionary at <http://www.mathpro.com/math/glossary/glossary.html>. The Los Alamos National Laboratory Mega-Math page at <http://www.c3.lanl.gov./mega-math/> is a fine reference source on mapping, graph theory, knot theory, algorithms, computer science and, last but certainly not least, infinity. For each topic there is background and overview information, vocabulary, activities and required materials, test preparation exercises and examinations.

## THE K-12 BROWSER

### *North Carolina AP Math Students*

The North Carolina School of Science and Mathematics in Durham has begun its second year of offering a calculus to advanced high school students at two remote sites. The distance learning course, launched by professor John Goebel, provides advanced placement students with an educational opportunity matching their capabilities. Students attending the calculus course through the Internet participate in labs and carry out investigations that lead to the discovery of the important calculus concepts necessary for the solution of reality-based problems. *Mathcad*, by MathSoft, Inc., is used in the course because of its numerical, graphical, and symbolical capabilities, as well as for its e-mail and Internet connectivity. Contact Professor John Goebel at **(919)286-3366**.

### *Biology*

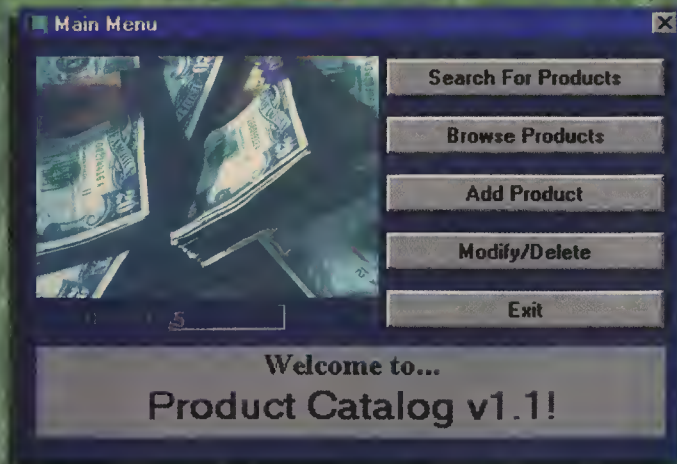
Peregrine Publishers Inc., has launched an educational Web site filled with resources for the biology classroom. The site is organized upon the topics of cells, genetics, evolution, diversity, plants, animals, and ecology. Science teachers can find it at <http://www.biology.com>.

## MEMO FROM THE DEEP POCKETS DEPARTMENT

To help educators meet the challenge of incorporating technology into the classroom and curriculum, the U. S. Department of Education sponsors "Challenge Grants for Technology in Education." For more information voice call **(202)708-6001** or visit <http://www.ed.gov> and you will reach the Office of Educational Research and Improvement. ♦



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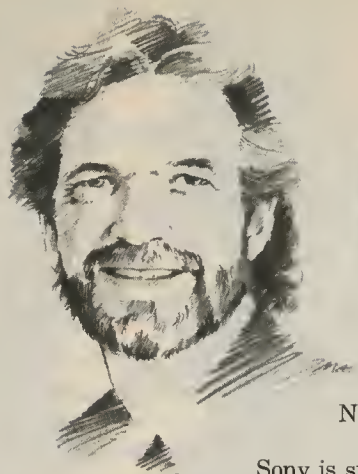
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# Online Multimedia Database





# MANNING THE WIRES

by Ric Manning

COMING SOON TO YOUR TV: THE WORLD WIDE WEB

Have you heard about some of the new Net/TV products?

Sony is supposed to be working on a VCR that can record and play QuickTime files and other video clips from the Net (a parental lock-out feature is optional). Panasonic reportedly has a bread machine that can download recipes from the rec.food.baking newsgroup.

And how about that dashboard gadget in the new Ford Explorers? It can get you an instant travel plan from Microsoft's Automap Web site, look up a street address and log into online Yellow Pages directories to find the nearest espresso bar.

Hey, I'm joking, okay? Don't start calling Panasonic looking for that bread machine. But with all the recent talk about Internet appliances, do those products really seem so bizarre?

At this spring's two major trade shows for gearheads — the Consumer Electronics Show in Orlando and Spring Comdex in Chicago — any company with an R&D department was trying to position its products alongside the Internet.

And why not? So-called Internet stocks are blazing. Online services and local Internet providers are signing up new customers as fast as they can answer the phone. Never mind that their support staffs are being swamped by callers who think a Winsock is something on a flagpole at the airport.

The race is on to get America wired into the Net and it's not all that important if it's America Online, AT&T, Nintendo or Mattel that gets the job done.

## NETWORK COMPUTERS

A lot of the buzz in the computer industry has focused on Network Computers, the so-called \$500 boxes designed primarily to be plugged into the Net. Oracle Corp. CEO Larry Ellison first floated the idea. Since then Apple, IBM, Netscape and Sun Microsystems (but not party-poopers Microsoft) have given the idea more credibility by helping prepare a set of technical guidelines for the machines. The group even has a Web site (<http://www.nc.ihost.com>) to promote the concept. But while we wait for the Network Computers to arrive — and for the cable TV companies to rewire every neighborhood for cable Internet — several con-



Gateway's Destination PC-TV starts at \$3,800

sumer electronics companies are already charting their own path to the Net. At the front of the pack are television manufacturers, who have been looking at declining sales forecasts since 1994.

## PC-TVs

Gateway 2000 (<http://www.gw2000.com>) is the first computer company to actually bring a PC-TV to the market. The Destination PC is made to be used in the living room and with prices ranging from \$3,800 to about \$4,700, it better offer more than your standard big-screen TV.

In addition to a 31-inch TV monitor (not a computer monitor), the Destination has a 120-megahertz Pentium processor, a wireless keyboard, 16 megabytes of RAM, a 1.2 gigabyte hard drive, a fast CD-ROM and a 28.8 kbps modem.

Compaq and Thomson Consumer Electronics are cooking up a similar machine. "What we want to do," said Guy Johnson, vice president of multimedia and video products for Thomson Consumer Electronics, "is create not just a PC-TV but a whole new category of products."

Johnson said the partnership between its RCA unit and Compaq will focus on devices that will combine TV, home theater, PC and online communications. The unit will expand the Genius Theater system that RCA announced earlier this year. That unit combines a large-screen TV with surround-sound audio.

Ric Manning writes about business technology, computers and consumer electronics for *The Courier-Journal* in Louisville, Ky. His weekly column called *Home Tech* is distributed to more than 80 newspapers by the Gannett News Service and it's available on the World Wide Web <http://iglou.com/gizweb>

Ric was the founding editor of *Plumb* and *Bulletin Board Systems*, two newsletters that covered the BBS arena in the early 1980s. His freelance work has appeared in several magazines including *PC/Computing*, *Mobile Office*, *PC Week* and *Home Office Computing*. Ric lives in Southern Indiana with his wife, two children and a champion Weimaraner. Write to Ric at [mailto:ricman@iglou.com](mailto:mailto:ricman@iglou.com)



A prototype of the PC-TV that the two companies showed at CES featured a 36-inch monitor, a TV tuner and a PC with a conventional hard drive and modem. In place of the CD-ROM drive, RCA would prefer to have a DVD player, the new high-capacity digital discs that can store an entire movie or 2 gigabytes of data.

The centerpiece of the system is the "Entertainment Manager," a sophisticated program grid which can juggle live signals from broadcast networks, satellite or cable feeds and a link to the World Wide Web. The system would let you browse a variety of material sorted by time, by source or by theme. Say you're interested in science fiction. The Entertainment Manager might show you a list that includes "The X Files" on network TV, "Stargate" on a movie channel and "Alien" on digital video disc. It would also give you one-click access to the "X Files" Web site or a home page for "Star Wars" fans.

The idea, said Compaq's Laurie Frick, is to deliver "a deeper multimedia experience, one that combines communication with entertainment."

Zenith is another TV maker that wants to play on the Net. At CES, the company showed off NetVision, a 27-inch TV with a built-in Web browser and a companion 28.8 kbps modem. The new sets will be out this fall at a cost of about \$1,000.

A suburban Chicago company called MultiMedia Systems Inc. - <http://www.mcs.net/~visiplex/tvlink.html> - also believes it has an easy way to merge TV and the Web. The company plans to sell a "smart box" called **TVLink** that plugs into a telephone line and a TV cable to give you both "ER" and URLs. Company officials say the unit will be on the market this fall at a price of about \$400 — \$475 if you also want a keyboard.

Curtis Mathes, best known for high-end televisions, plans to offer a new add-on device that will expand a television's capabilities to include some Internet services. The \$400 box delivers UniView, a TV listing service similar to StarSight. The device also includes a credit-card reader for home shopping and a telephone manager. Owners also can use UniView to sign up for an online service to get electronic mail but not surf the Web.

Who would want such a device? "This is probably for someone who doesn't even have a computer," said company President Pat Custer.

## GAME DECKS

And don't count out the video game companies. Sony Electronics blew away Sega and Nintendo last year with its PlayStation, the hottest video game machine on the market. Now Sony has again ventured into the PC business where the Internet has become a major force. How about a PC-PlayStation-Internet box?

Sega of America hopes to use the Internet to revive the fortunes of its flagging 32-bit game machine. The company says it will release a \$200 add-on device for its Saturn game machines that will give the deck access to the Net. Philips, which never could get its CD-i machines established in the gaming arena, plans to redesign its \$750 decks to incorporate a link to the Net. And Nintendo's new 64-bit game machine may also get an Internet option.

But the first Net-savvy game machine to hit the market will probably be the Pippin. Japanese toymaker Bandai Co. (<http://www.bdec.com>) has licensed Pippin's technology from Apple for use in a \$600 device called **Pippin @World**.

The @WORLD has a 66-MHz Power PC processor, a CD-ROM player, and serial plugs for a modem and a printer. In addition, buyers get a 13-button controller and an optional keyboard and mouse.



**\$400 TVLink adds dialup Web, e-mail to your TV**

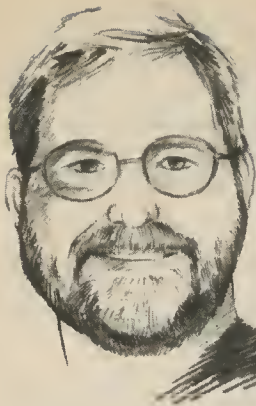
Pippin's price and its game-playing ability could give it an instant advantage over other Internet boxes, even though it can only play games that use Pippin discs — not standard computer CD-ROMs. The box has another strong advantage. It comes with output ports for both NTSC and VGA video.

The last time I looked, the World Wide Web was still populated largely by material in text form. Online graphics are nice, and they don't look bad on a 31-inch television. But most of the big-time Web sites — Pathfinder, ZDNet, ESPNet — give you stuff to read. And I don't think I'm the only person who thinks reading text on a TV screen is a lousy idea. ♦



**\$600 Pippin @World Game/Web Machine**





by Bill Gram-Reefer

# THE DEREGULATION FEEDING FRENZY

## AT&T GIVES CUSTOMERS A PIECE OF THE ROCK

If you've wondered where the 15,000 salespeople Prudential fired landed, best look no further than AT&T. Prudential, of course, is the huge insurance company that was heavily fined recently for fostering a vulture sales force that ran roughshod over its customers by churning accounts, lying about policies, and generally giving the Richard Allen Davis wink-kiss-double-fork-you-finger to its customers. Maybe some Time Lord in the Senate should have written an etiquette FAQ sheet to go along with the Telecommunications Act of 1996. Such a list of common-sense reminders about fair play and customer service would serve AT&T well as it mimics Prudential's management style in spirit and deed, if not in personnel, in its gluttonous quest to gobble up telco market dollars.

AT&T has made significant headway into many local telco markets once managed exclusively by RBOCs like Bell Atlantic, Nynex, or BellSouth. Someday this may mean enough competition to actually reduce rates for ordinary users. But in the meantime, the battle that seems to be shaping up is one where AT&T wants to manipulate the Telecommunications Act to its benefit by entering as many local telco markets as it can, but limit, impede, and stonewall entry of the Baby Bells into its long-distance turf.

Recent news shows AT&T ready to enter markets such as Virginia, Maryland, and Georgia, to name just a few areas. But there are some snags along the way. In Virginia, the State's utility commission approved AT&T's request to enter that market in competition with Bell Atlantic, but AT&T is having a tougher time getting an actual interconnection pact with the RBOC. Seemingly, ex-Prudential agents now working as AT&T regional managers are blaming Bell Atlantic for delay tactics that slow the implementation of competition.

A key issue, of course, is the price that AT&T will pay for access to Bell Atlantic lines. AT&T claims it will eventually build its own network but wants to crack new markets using the existing infrastructure — by gouging a 32-percent discount off retail out of Bell Atlantic. Accused of foot-dragging by AT&T, Bell Atlantic has already struck deals with Denver-based Jones Intercable and three other firms as new local service providers. So the truth may be that Bell Atlantic is more than eager to strike a fair deal with AT&T (not 32%), especially because this agreement would clear the way for the RBOC to go into the long-distance business itself. According to Paul Miller, a spokesperson for Bell Atlantic, "AT&T is far more

interested in keeping us out of long-distance markets than it is in getting into local markets."

Stonewalling? You bet! But it isn't the RBOCs. In June, indicating its complete frustration with AT&T's tactics, BellSouth asked the Alabama Public Service Commission to mediate negotiations between BellSouth and AT&T after bitter, fruitless months of interconnection negotiations. "This request for mediation will help to bring the issues up for discussion with an objective third-party in order to move the process along," noted Charlie Coe, Group President of Customer Operations for BellSouth.

In Virginia, AT&T whined that Bell Atlantic rushed to open its local monopoly to small-time players but not to real competition like AT&T. But in Alabama, BellSouth has already signed interconnection agreements with big-time national players like Time-Warner, proving AT&T's crocodile tears don't wash so deep in Dixie.

AT&T's new Pruco-style of management includes harassing state and federal regulatory agencies and publicly bad-mouthing their RBOC competitors' ability to provide long-distance service. According to Coe, "AT&T has plans to enter BellSouth's markets soon. On the other hand, in remarks attributed to AT&T's CEO Bob Allen, AT&T does not believe that BellSouth will be in the long-distance business before the turn of the century because of AT&T's 'bird-dogging' of the FCC and state regulatory commissions. This is a policy to slow competition down, not promote it as the [Telecommunications Act] intended."

The appeal for mediation in Alabama is a critical battle. BellSouth will insist that the issues between it and AT&T are the same state to state, and therefore mediation in all nine Southern states representing 21 million phone lines would be redundant.

### AT&T CALLING CARD - EXPENSIVE DOUBLECROSS

So if that's how AT&T is treating its new competitors, just guess how it's doing with us customers. Not much better. First there's the very Prudential-like move to not allow local telephone companies to honor AT&T calling-card calls for local and toll calls. Consumers who try to place a local toll call with their AT&T calling card by dialing 0 plus the number they are trying to reach now get a recording or live operator explaining that the call cannot be completed as dialed. Essentially, AT&T is forcing its calling card customers to use AT&T's network for a local or toll call.

Bill Gram-Reefer, based in Concord, CA, is president of WORLDVIEW, specializing in connectivity and communications. His Online Services column appears monthly in *MicroTimes*. His web page can be accessed at <http://worldview-bbs.com>. E-mail Bill at [reefer@worldview-bbs.com](mailto:reefer@worldview-bbs.com)



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AT&T then bills that customer a surcharge, in some places 80 cents or more per minute, over the basic rate.

Calling card agreements were terminated with Nynex in April; followed by GTE and Ameritech in May; Bell Atlantic in July; SBC in August; and BellSouth will be rubbed out in November while PacBell is scheduled to get chopped early in 1997.

Those aren't the only cards in the deck AT&T is trying to stack. It is now sending out AT&T Universal Mastercards to existing calling card customers that have been screened as creditworthy. You probably never looked at the junk-mail they sent you warning you that to avoid having the card sent to you automatically you had to call up AT&T and say, "No, I don't want this."

"There's nothing wrong with AT&T trying to get new business with new (credit card) customers," said Ruth Susswein, executive director of Bankcard Holders of America. "It's the way they're going about soliciting that's the problem. No consumer should have to call a company and say, 'I don't want this offer, I didn't say I wanted this, and I shouldn't have to take the time to opt out.'" AT&T is

aiming to expand its credit card business while offering customers the convenience of a "substitution" card with a single number that will be both their MasterCard and calling-card numbers.

## DOUBLE BILLINGS FOR LONG-DISTANCE

Then, in June, AT&T started to illegally bill its long-distance customers separately in California, instead of just letting me pay my long distance charges with my PacBell payment. They didn't ask anyone. They didn't tell anyone. They just started doing it. Predictably, millions of AT&T customers have double paid AT&T's long distance charges since June.

Administrative Law Judge Robert Barnett of the California Public Utilities Commission said he would issue an order recommending that AT&T be required to send customers now receiving an AT&T bill a special corrective letter advising them that they have the option of continuing to receive one bill from Pacific Bell for all their Pacific Bell and AT&T calls. Barnett said AT&T had violated a 1994 CPUC decision on two counts: it failed to give its customers the required 60-day notice before issuing a separate bill for AT&T charges; and it failed to have the customer letter reviewed by the commission's Public Advisor's Office prior to sending it. In his comments, Barnett indicated to AT&T that one sentence buried in the company's letter to customers is not adequate to allow them to make an informed choice.

Now we learn via *Boardwatch's* own Durant Imboden that AT&T's WorldNet PPP service refuses to provide customer support for Microsoft Network subscribers who have trouble logging onto the MSN service using WorldNet. One MSN subscriber writes:

*"About the 1st of June, 1996, I received the disks from AT&T (WorldNet) and installed them. I did need help from their tech support. They were very nice. 3-4 days later I called tech support and told them I needed assistance with the TPA connection with MSN. The answer was, AT&T does not support MSN and we cannot help you, then hung up. One of the MSN members told me that he had problems with AT&T and had called Corporate headquarters in New Jersey. They made the connection for him. The name of the executive that he spoke to was a Ms. Donna Alcorn. I called Ms. Alcorn. I was told she was on vacation and I was*

*turned over to someone (the name escapes me), who was covering for her during her leave. I explained my situation and his reply was, 'AT&T does not support MSN. Ms. Alcorn must have been doing a personal favor for someone, but it is AT&T's policy not to support MSN and we will not help you.' My reply to that was, I'm not asking you to support MSN, I'm asking you to support me, your customer. Again, I got, 'AT&T does not support MSN.'*


*"In all fairness, I must admit to being very new to all of this and my lack of knowledge was somewhat to blame. I should have said, I need assistance with a Dial-up networking connection. However at the time, I did not know that Dial-up and TPA were two different things. Still, I was given no option or direction from AT&T.*

*"I have, since then, talked to Pac Bell, MCI and Netcom. All said they would help with dial-up, and did not care who or what or where I use the Internet, as long as I'm paying them their monthly fee. To me, that is an honest and forthright response. I'm now using Netcom(local access) and my long distance carrier is MCI. One more thing I would like to add. MSN has the very best support. If the assistance does not come from MSN member support, the members themselves pitch right in to assist. It's great."*

While all this was happening, Bob (I'm worth every penny) Allen was flatulently talking to stock analysts in New York, claiming AT&T would grab at least a third of the local phone market from the regional Bells within the next few years. "Since the Bells now have zero market share in long distance, they'll understandably take some market share from the existing long distance companies ...but speaking for AT&T, any revenue we lose there will be more than made up in non-traditional services," said Allen in yet another seemingly unassailable self-fulfilling prophecy.

But is it? Has this knucklehead actually talked to a real customer in the past 18 months? Seriously, Bob, as long as AT&T emulates Prudential's customer service and sleazy industry tactics, it just ain't gonna happen!

The way things are going, unless laughing boy learns the code, the famous AT&T slogan, "You Will," will become the default answer to the question: "Have you been screwed by AT&T yet this year?" ♦



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# PUTTING THE NET TO WORK

by Durant Imboden

## LITERATURE FOR THE WEB-LITERATE

When David Hakala of *Boardwatch* asked me to write a column about literary resources on the Web, he was blunt in explaining his rationale.

"You don't know a UNIX server from a waiter in a harem, and you probably think a 'cookie' is a character in a

Beetle Bailey comic strip," he told me. "Still, we need a token liberal-arts type to show that we aren't just a magazine for techies. And the computer science majors in our audience need to pass English Lit before they can graduate — so let's make their task a little easier with a Cliff's Notes directory of literature sites on the Web."

Fair enough, I thought. How many people get paid to search the Web for Victorian poetry, postmodern literary criticism, and doctoral theses on *Moby Dick*? After dusting off my notes from Mrs. Friedland's Senior English class at Taipei American School, I went to work.

Somewhere in the mists of memory, the name "Beowulf" waved itself like an Anglo-Saxon war banner. Was English Literature's first great epic represented on the Web? It was — and still is, most conveniently at *Beowulf for Beginners*, <http://ifl.rmpic.co.uk/bw/BEOWULF4.HTM>. Here, you'll find an easy-to-read translation of the poem in modern English, along with maps and assorted bits of historical trivia.

When you're tired of cheating with the junior-high version, you can head for the real *Beowulf* at <http://marigold.colorado.edu/~torrence/beowulf/beowulf.html>. Chris Torrence, a graduate student in physics at the University of Colorado, has provided the poem's original Saxon text (runic characters and all) with his own English translation alongside. It's an impressive piece of work, considering that it was done by a man whose graduate thesis is on "the limits of predictability of the coupled ocean-atmosphere system, on interannual to interdecadal time scales."

Deciding that Old English was a bit too challenging for my slugabed intellect, I headed for the *Labyrinth Library Middle English Bookcase* at <http://www.georgetown.edu/labyrinth/library/me/me.html> to investigate Chaucerian sites. Labyrinth Library is but a small part of the Labyrinth World Wide Web Server for Medieval Studies, which has links to everything from heraldry to alchemy. Labyrinth pointed me toward *The Canterbury Tales* page at the University of Virginia Electronic Text Library, <http://www.lib.virginia.edu/texts>

.html, which offers a vast selection of classic and contemporary texts in English, French, German, and Japanese. (The *Canterbury Tales* are on the <http://etext.virginia.edu/mideng.browse.html> page, which thoughtfully lists file sizes and provides "table of contents" access to bite-size chunks of larger works.)

While browsing the *Canterbury Tales*, I eagerly sought out the "Wife of Bath's Prologue" so I could bring you the raciest passage ever to appear in *Boardwatch* magazine:

### "THE WIFE OF BATH'S PROLOGUE," FROM THE CANTERBURY TALES

*Allas! alas! that evere love was synne!  
I folwed ay myn inclinacioun  
By vertu of my constellacioun;  
That made me I koude noght withdrawe  
My chambre of venus from a good felawe.  
Yet have I martes mark upon my face,  
And also in another privee place.  
For God so wys be my savacioun,  
I ne loved nevere by no discrecioun,  
But evere folwede myn appetit,  
Al were he short, or long, or blak, or whit;  
I took no kep, so that he liked me,  
How poore he was, ne eek of what degree.*



Having accomplished my mission, I jumped ahead to Elizabethan times and *The Works of the Bard* at <http://www.gh.cs.usyd.edu.au/~matty/Shakespeare>. Why this page among the innumerable Shakespeare sites on the Web? Simple: It has an exceptionally handy search engine. Enter the word "lust," for example, and within a few seconds you're presented with a list of passages containing that word. You can even choose a "lines of context" setting, which determines how much text is displayed above and below each occurrence of the search string.

Durant Imboden is a freelance writer who manages the Writing forum in the Arts & Entertainment category of The Microsoft Network.

His credentials include published novels, articles, and short stories; fiction editing and staff writing for *Playboy*; representing authors at a New York literary agency; and freelance copywriting for Lotus, Apple, Northwest Airlines, US West, and other national advertising accounts. When not typing, Durant is a volunteer announcer at local, state, and sectional figure-skating competitions. Mailto:

[Durant\\_Imboden@msn.com](mailto:Durant_Imboden@msn.com) on the Internet. The author is not an employee or spokesman for Microsoft.





### Is This the Real Shakespeare?

Another useful site is *Mr. William Shakespeare on the Internet*, at <http://www.palomar.edu/Library/shake.htm>. This handsomely produced guide to Shakespearean Web resources makes good use of tables, and it's conveniently organized into subcategories such as "the man," "the works," "criticism," etc. I used it to reach the *Shakespeare Oxford Society Home Page*, <http://www.shakespeare-oxford.com>, which preaches a contrarian Gospel: namely, that William Shakespeare's works were actually written by Edward de Vere, 17th Earl of Oxford (1550-1604). Despite its cheerfully announced bias, this comprehensive site has links to any number of non-Oxfordian URLs.

But the most attractive Shakespeare (or de Vere) site that I found in my travels was William A. Luddy's *First Folio*, <http://www.ludweb.com/msff/msff.html>, which wowed me with its MIDI sound and simple but beautiful graphics. In addition to sonnets in streaming audio and the plays (which are still under construction), First Folio offers a nicely annotated collection of links to other Shakespeare sources that range from *Shakespeare's Globe* (<http://www.globe.jhc.net/theglobe.htm>), which offers a free screensaver, to heavily touristed areas like the MIT's *The Complete Works of William Shakespeare* at <http://the-tech.mit.edu/Shakespeare/table.html>.

After gorging myself on the Bard, I took a break and found my two boys shooting craps on the living room rug. Their pair of dice made me think of Milton's *Paradise Lost*, so I returned to my office and revved up the search engines to see if that great author from England's Cromwell era was represented on the Web. My first hit was *The Milton-L Home Page*, <http://www.urich.edu/~creamer/milton.html>.

This site at the University of Richmond kept nagging me with JavaScript error messages (possibly because I was using an early beta of Microsoft Internet Explorer). But it provided access to a host of Milton resources — among them, the Milton-L mailing list, which is available as a series of HTML archives. The Milton-L Home Page is also host to the Milton Transcription Project, which is working to put all of Milton's prose and poetry on the Web.

Catching a glimpse of my wyf (sic) as she emerged from the bath, I felt Chaucerian urges that I sublimated into romantic longings. So off I went to *Jack Lynch's Literary Sources—*

*Romantic* at <http://www.english.upenn.edu/~jlynch/lit/romantic.html>. The page was short on graphical flair but long on useful links, such as a directory of Mailing Lists ([gopher://gopher.english.upenn.edu/11/Lists/Romantic](mailto:gopher://gopher.english.upenn.edu/11/Lists/Romantic)) and *Michael Gamer's Romantic Links, Home Pages, and Romantic Texts* (<http://www.english.upenn.edu/~mgamer/Romantic/index.html>.) The latter includes calls for papers in the directory [gopher://gopher.english.upenn.edu/1m/Announce/CFP/Romantic](mailto:gopher://gopher.english.upenn.edu/1m/Announce/CFP/Romantic).

Seeing two Gopher sites in a row after several years of Webbing sent me on a search for more. (And why not? I live in Minnesota, and my first ISP was the Mother Gopher's U of M.) I discovered a jam-packed Gopher directory at Oxford University in England, [gopher://rs1.ox.ac.uk/11/lib-corn/hunter/BrowseAlex/](mailto:gopher://rs1.ox.ac.uk/11/lib-corn/hunter/BrowseAlex/). Here, I was able to browse by author, date, host, language, subject and title.

With a deadline looming, I decided it was time to leap ahead into the Victorian Era — more specifically, the *Victorian Web* at <http://www.stg.brown.edu/projects/hypertext/landow/victorian/victov.html>. This Web proved to be far more than a literature site, encompassing religion, philosophy, politics, social structure, science, and a host of other topics related to the Victorian era. Clicking the "Literature" button led to a handy timeline for those with short memories, links to Victorian authors, and a variety of critical resources.

Taking a moment to stretch, I looked out the window and saw the Stars and Stripes flying from the bumper of a passing Ford pickup. I felt an instant surge of literary jingoism and abandoned Victorian England for the *American Literature Survey Site* at <http://www.en.utexas.edu/~daniel/amlit/amlit.html>. This site proved to be an eclectic mixture of manuscripts, student projects, and links to similar locations on the Web. It's worth visiting for its interactive texts, which let users post comments about Irving's *The Legend of Sleepy Hollow*, Melville's *Bartleby the Scrivener*, and other works.



"Papa"  
Hemingway —  
age 18 months

I turned in my swivel chair and knocked something off my desk. I glanced down and saw that it was a letter from Twentieth Century Fox rejecting my screenplay, *The Bill Gates Story*. (They must have heard about Bill G's alliance with *Dreamworks*.) Taking the Twentieth Century logo as an omen, I decided to focus on modern

American authors—starting with *The Papa Page*, a Hemingway homage at <http://www.ee.mcgill.ca/~nverever/hem/cover.html>. Marcel Mitran has assembled photographs, biographical information, literary quotes, paintings, and links to other Hemingway URLs in this lovingly maintained paean to Papa.





### **William Faulkner on the Web,**

<http://www.mcsr.olemiss.edu/~egjbp/faulkner/faulkner.html>, pays tribute to the novelist who turned Yoknapatawpha County into a household name a generation ago. **Author, Author!** has links to Web sites about writers (including many who are still alive) at <http://www.li.net/~scharf/writers.html>. And for a real treat, it's hard to beat **Levi Asher's Literary Kicks**, which honors Jack Kerouac, Allen Ginsberg, William S. Burroughs, Gregory Corso, Lawrence Ferlinghetti, and other writers from the Beat Generation at <http://www.charm.net/~brooklyn/LitKicks.html>.

In wrapping up this literary tour of the Web, I'll draw your attention to a site that blends a scoop of scholarship with a generous dollop of fun. **The Surrealism Server** is an entertaining, visually attractive, one-of-a-kind compendium of everything you've ever wanted to know (or ignore) about the surrealist literary movement. Includes surrealist writing, the Cadaveric Enigma Engine Generator, and the Surrealist Compliment Generator, which produces sentences like "You wear your breasts to their full extent, like a man with an uncontrollable bulge in his apartment." Highly recommended to anyone with a fondness for the ridiculous and the sublime." Look for the Surrealism Server at <http://pharmdec.wustl.edu/juju/surr/surrealism.html>. ♦

## **GENERAL LITERATURE RESOURCES**

There's no shortage of interesting literary sites on the Web. Tracking them down with a search engine can be a nightmare, however, since a search on the word "literature" is likely to turn up citations for everything from prehistoric poetry to sales brochures. For anyone who isn't on an academic scavenger hunt, it's far easier (and more productive) to use the convenient links at sites like these:

Web Lit, <http://www.rust.net/~rothfder/weblit.html>. An attractive, frame-based collection of hypertext links under headings that include "authors and poets," "downloadable text," "author FAQs," "other links," and "4-star pages."

English Language and Literature, [http://www.lib.vt.edu/lib/armstrong/English\\_L&L.html](http://www.lib.vt.edu/lib/armstrong/English_L&L.html). Despite its name, this Web also features some of the more important American literary sites (including the popular Mark Twain Resources at <http://web.syr.edu/~fjzwick/twainwww.html>, which now includes frames for those who like whipped cream on their HTML).

Wolfgang Hink's A Guide to Literature on the Internet. As the name implies, this page goes beyond mere Web links to include newsgroups, mailing lists, FAQs, library catalog listings, and other goodies...albeit with a plain Jane (Eyre) interface. The URL is <http://coombs.anu.edu.au/~andrea/andrea/HinkLitGuide.html>.

Nerd World: Classic Literature, <http://www.nerdworld.com/users/dstein/nw267.html>. A modest but interesting group of links to topics as diverse as Shakespeare, Jack Vance, and the Dutch Franz Kafka Circle.

English Language and Literature Resources, a businesslike selection of hypertext pointers to other sites (including journals and teaching resources). Judy Reynolds manages this site at <http://cicero.sjsu.edu:8001/connect/english.html>.

Literature and Languages, a Hong Kong site with the URL <http://www.arts.cuhk.hk/Lit.html>, offers links to literary resources in a number of languages—including Chinese. Linguists will find a mailing list, downloadable IPA phonetic fonts, and a table of phonGIF characters for Web pages.

Voice of the Shuttle English Literature Main Page, <http://humanitas.ucsb.edu/shuttle/english.html>. English-language literature from Anglo-Saxon to modern times, with information on text-analysis, bibliographic, and writers' software. British and European users should access the UK mirror site at <http://info.ox.ac.uk/~enginfo/shuttle/english.html>.

Banned Books On-line, an exhibit from Carnegie-Mellon University that chronicles attempts to suppress books. Examples range from Blaise Pascal's *The Provincial Letters* (1660) to recent book-banning efforts by the Church of Scientology. The URL is <http://www.cs.cmu.edu/Web/People/spok/banned-books.html>.

Literature: Poetry, <http://www.vmedia.com/shannon/poetry.html>. It isn't fancy to look at, but it includes enough poetry links to keep the coffeehouse crowd occupied for years.

Writing on the Web, a small but growing site at <http://www.writing.org> that I play with when I'm not managing the Writing forum on The Microsoft Network. Use it to sample links for writers that I haven't had room to include here.



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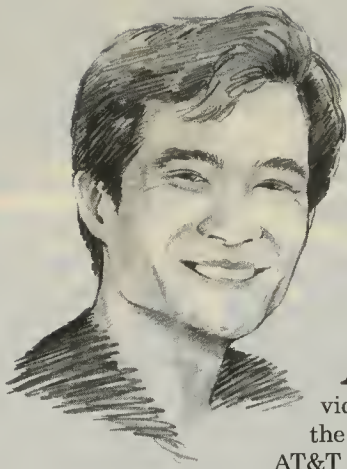
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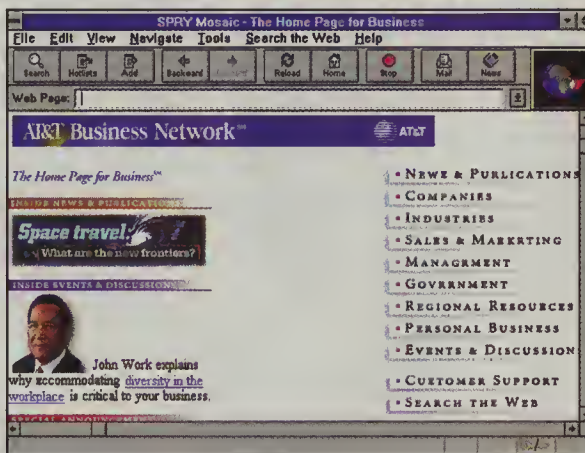


# BIG BOARD BRIEFS by Wallace Wang

## THE REINCARNATION OF AT&T'S INTERCHANGE

After spending almost \$40 million to acquire the proprietary online service, InterChange (which promptly died in the wake of the World Wide Web's popularity), AT&T has now launched the **AT&T Business Network**, which is the reincarnation of Interchange converted to web standards.

Unlike the Interchange, the AT&T Business Network is absolutely free for anyone to use, although its main target is business users. AT&T hopes that Business Network will become the first page that business users see when they turn on their browsers. To entice business users to their site, AT&T Business Network provides links to over 1,000 business-related sites including credit reports, federal government sites, bankruptcy information, and industry-specific yellow pages.



To see the future of online services, visit AT&T Business Network at <http://www.bnet.att.com>. Combined with AT&T's WorldNet Internet service, maybe AT&T has finally gotten the right formula to survive in the online market.

### TALKING E-MAIL

While America Online wrestles with declining subscriber growth, CompuServe has quietly been pursuing the business market. CompuServe's latest venture includes **Smart Rules**, a joint venture with Premiere Technologies, Inc. The goal of Smart Rules is to allow people to retrieve and reply to e-mail without once touching a computer.

After signing up to Smart Rules (**GO CALLCARD**), you'll receive a CompuServe Communications Card that provides you with a toll-free number so you can hear a computer read your e-mail to you. After listening to your e-

mail messages, you'll be able to reply using one of five canned messages. CompuServe eventually wants to offer users the ability to customize their own messages from among 900 "form" messages. Smart Rules isn't part of the normal CompuServe membership; but the good news is that it only costs an additional \$0.25 per minute.

CompuServe hopes to extend this technology so users can listen and reply to forum messages, access local traffic updates, and even receive stock quotes and news reports through their pagers and cellular phones. Soon you may be able to use CompuServe without once touching a personal computer.

Perhaps this is the real future of online services. After saturating the personal computer market, CompuServe has positioned itself to attract the growing pager and cellular phone markets as well. Now if CompuServe made this service as easy as dialing a phone, they might have something that could revolutionize the communications industry — as long as their own executives don't get in their way of success.

### AMERICA ONLINE'S GROWTH SLOWING

America Online's skyrocketing growth seems to be slowing lately. During the last quarter, America Online forecast up to 750,000 new subscribers, but only added 400,000 subscribers. While this still keeps them ahead with six million members (compared to CompuServe's five million), it does represent a shakier future for America Online.

Perhaps in the wake of these problems, it comes as no surprise that America Online's President and Chief Operating Officer, William Razzouk, has resigned. Razzouk had joined America Online in February, but claimed that the prospect of relocating his family to the Washington, D.C. area was a significant factor in his decision. (Didn't he know where America Online was located when he took the job?)

### ONLINE IN EUROPE

Despite slowing growth in the United States, America Online continues adding new subscribers, mostly from their overseas operations. AOL Deutschland (the German version of America Online) reports that they have topped the 100,000 subscriber mark after only six months of operation. Eventually America Online hopes to sign up at least 10 million worldwide customers by the end of 1996.

Not to be outdone, CompuServe reports it has surpassed 500,000 members in Europe with 200,000

Wallace Wang is the author of **CompuServe For Dummies**, **Procomm Plus for Dummies** and **Visual Basic for Dummies** (all published by IDG Books) as well as **Surfing The Microsoft Network**, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at 70334.3672 @compuserve.com or bothekat@aol.com or bo\_the\_cat@msn.com

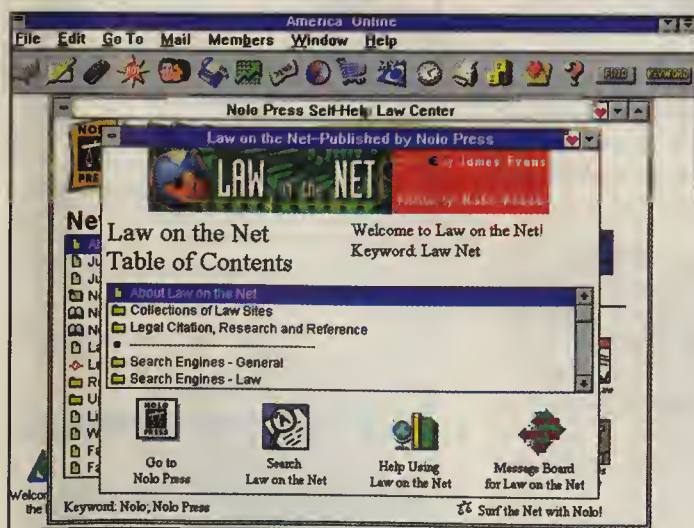


members in the United Kingdom alone. To attract European subscribers, CompuServe is offering country and language-specific content. In the U.K., organizations such as the Press Association, Reuters, Automobile Association, Selfridges and Dixons now provide services and sell merchandise through CompuServe. In France, CompuServe has recently added *L'Express* magazine and France Cinema Multimedia to its local service offering, while in Germany, Spiegel and Bertelsmann are now available.

## SOMETHING NEW ON AMERICA ONLINE AND COMPUSERVE



To keep current members happy and attract new members, both America Online and CompuServe keep adding new services. The latest defection from America Online to CompuServe is *National Geographic* (GO NATIONAL). (Let's just hope that anti-porn groups don't get mad at National Geographic for showing pictures of women's breasts in Third World countries.)



In the wake of today's litigation-happy society, Nolo Press has opened a new "Law on the Net" service on America Online. Law on the Net features more than 2,000 hot links to the best legal sites on the Internet (**Keyword: Law Net**). Law on the Net is a directory of law and government resources around the world.

"Access to law for the average American has always been Nolo's goal," according to Ralph Warner, co-founder and publisher of Nolo. "Law on the Net is a truly revolutionary tool for direct access to legal information. Instead of paying a lawyer at \$200 per hour or trying to cope with the complexity of a law library, users can find needed information using plain English commands almost instantly."

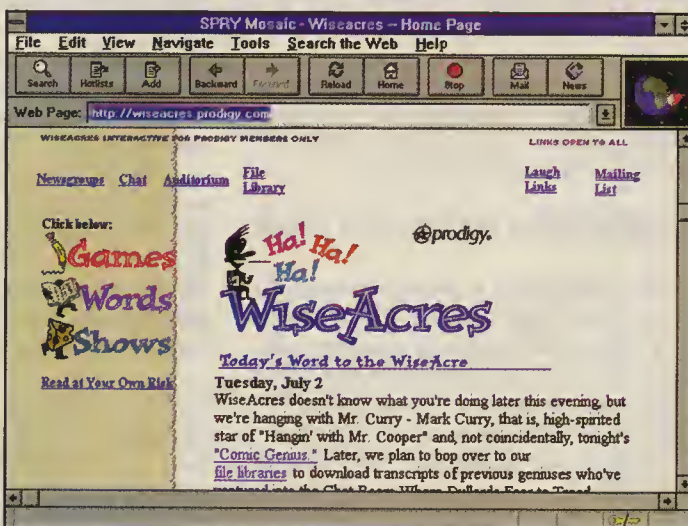
So the next time you want to sue someone, arm yourself with the latest legal resources from Nolo Press and America Online first. Maybe you can even use Law on the Net to find legal ammunition to fuel the class action suits charging America Online with unscrupulous billing practices.

## PRODIGY LAUNCHES NEW WEB OFFERINGS

Prodigy has unveiled a new service, dubbed *Stim* (<http://www.stim.com>), which offers a monthly guide to "deviant pop culture" that includes literature commentary and profiles of video games. The company plans to publish a new version of its online magazine on the 15th of every month.

The new Prodigy service features a combination of graphics, pictures and animation using both Shockwave and Real Audio technologies. Best of all, it's entirely free of charge (for now) but will feature advertising to help defray its costs.

In another move, Prodigy released "The Stimples," an original 3-D visual story that tells the story of three animated characters who live in a parallel world of black comedy and media oversaturation. "The Stimples" features a serialized graphic storytelling application on the World Wide Web. Each VTV "bubble" is a world unto itself. The individual is presented with a fish-eye lens look at each Stimple environment, where the three Stimple sisters live and play



Finally, Prodigy has released a new nighttime online comedy showcase called "WiseAcres," available to Prodigy members and Internet users at <http://wiseacres.prodigy.com>. Like Prodigy's late-night counterpart "Night People" (<http://nightpeople.prodigy.com>), "WiseAcres" is a Prodigy-created site which features original content and live events revolving around contemporary comedy.

While Internet users can access all content areas of the "WiseAcres" Web site, Prodigy members have exclusive access



to the regularly scheduled live programming Mondays through Saturdays at 11PM(ET).

Other original content on "WiseAcres" includes a weekly newsletter, newsgroups, file libraries, a Joke of the Day, and original writings. With so much activity happening at Prodigy these days, let's hope they survive. At the very least, they can keep all the other online services from getting too complacent.

## AMERICA ONLINE RIPS OFF MEMBERS AGAIN

After getting hit by eleven separate lawsuits filed in California, Pennsylvania, Delaware, Massachusetts, New Jersey and New York, charging that America Online overbilled customers for time (and even billed customers for time spent in supposedly "free" areas), America Online has agreed to a settlement.

Sounds good, right? Wrong. The settlement gives the heroic lawyers who filed these lawsuits **\$2.8 million**. And what do the overbilled customers get, the ones who got charged for time they didn't even use? They get one free hour to use America Online at their convenience - if they spent more than \$300 on AOL during the period covered by the suit. If you don't qualify for a free hour, or don't want to sign up again to spend it, you get to share in a measly **\$500,000** cash pool.

A Web site at <http://www.aolsucks.org/lawsuit> documents the entire settlement offer and urges members of the class action suit to reject it.

## COMPUSERVE RECORDS A LOSS

Since becoming a public company, CompuServe has revealed that they lost \$1.1 million for its fourth quarter ended April 30 (which is better than the loss of \$58.4 million in the previous year). Yet, this comes in the wake of a 31% increase in sales and a subscriber base of over five million.

In the past year, CompuServe added 1.2 million subscribers while America Online added 3.2 million subscribers during the same period. CompuServe's growth has slowed from 100,000 subscribers a month a year ago to about 65,000 per month. WOW!, CompuServe's new online service, only has 50,000 customers so far, which places them at the same extinction level as Delphi, GEnie, and eWorld.

## COMPUSERVE UNVEILS "VIRTUAL PASSPORT"

In an effort to move CompuServe completely to the World Wide Web, CompuServe has introduced "The Virtual Passport." If you access the Internet through an ordinary Internet provider, you have to pay an additional fee to access fee-based web sites such as Pathfinder. But if you access the web through CompuServe, WOW! or SpryNet, then the Virtual Passport allows you into all fee-based web sites without paying any additional fees.

CompuServe hopes to establish its Virtual Passport technology as an industry standard, so they're providing the client and server software free of charge. However, sites that wish to participate in the Virtual Passport system with CompuServe must sign a contract.

If America Online customers continually run into fee-based web sites but CompuServe members can breeze in and out without charge, this may prove a big factor in attracting more people to join CompuServe. For more information on the Virtual Passport technology, visit <http://www.compuserve.com/rpa/index.htm>.

## NBC AND THE MICROSOFT NETWORK DEBUT MSNBC

Looking like a letter is missing, MSNBC has arrived, the 24-hour news, talk and information network from NBC News and Microsoft. "Our goal at MSNBC," says Mark Harrington, MSNBC's general manager, "is to provide our viewers with the news they want, when they want it. In this unique service, that programming will be complemented by content on the Internet offering additional context and perspective to the day's news."

MSNBC anchors John Gibson, Jodi Applegate and John Seigenthaler will lead the network's daytime coverage, reporting on the major news events of the day and issues of topical interest. Evenings will be devoted to a variety of topical and discussion programs (hopefully none of them involving the O.J. Simpson trial). To visit MSNBC, aim your web browser at <http://msnbc.com>. ♦



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
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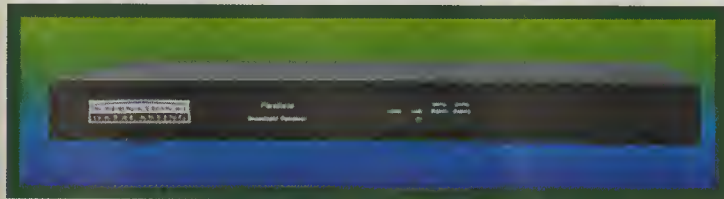
If you are looking at a satellite data system for delivery of Usenet news, make sure you check out the true data delivery of the system. We deliver more than 40 megs of compressed files per hour with our 128K satellite data system. This is important because the amount of Usenet news is growing as fast as the Internet.

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**THE RESULTS:**

These are actual logs taken from a 128K receiving computer.

**A portion of a Planet Connect 128K software reception log.**

```
5/21/96 0:36 Received. C:\SAVEALL\PC100K.675
5/21/96 0:37 Received. C:\SAVEALL\PC100K.676
5/21/96 0:39 Received. C:\SAVEALL\PC100K.677
5/21/96 0:40 Received. C:\SAVEALL\PC100K.678
5/21/96 0:41 Received. C:\SAVEALL\PC100K.679
5/21/96 0:42 Received. C:\SAVEALL\PC100K.680
5/21/96 0:43 Received. C:\SAVEALL\PC100K.681
5/21/96 0:44 Received. C:\SAVEALL\PC100K.682
5/21/96 0:45 Received. C:\SAVEALL\PC100K.683
5/21/96 0:46 Received. C:\SAVEALL\PC100K.684
5/21/96 0:46 Received. C:\SAVEALL\PC100K.685
5/21/96 0:48 Received. C:\SAVEALL\PC100K.686
5/21/96 0:49 Received. C:\SAVEALL\PC100K.687
5/21/96 0:51 Received. C:\SAVEALL\PC100K.688
5/21/96 0:53 Received. C:\SAVEALL\PC100K.689
5/21/96 0:54 Received. C:\SAVEALL\PC100K.690
5/21/96 0:55 Received. C:\SAVEALL\PC100K.691
5/21/96 0:56 Received. C:\SAVEALL\PC100K.692
```

**The files received above are shown below after reception.**

```
PC100K 675 981867 05-20-96 8:01p
PC100K 676 406475 05-20-96 8:01p
PC100K 677 1605302 05-20-96 8:01p
PC100K 678 998286 05-20-96 8:01p
PC100K 679 969215 05-20-96 8:01p
PC100K 680 843040 05-20-96 8:02p
PC100K 681 519203 05-20-96 8:02p
PC100K 682 469926 05-20-96 8:02p
PC100K 685 356812 05-20-96 8:03p
PC100K 686 1062919 05-20-96 8:03p
PC100K 687 840667 05-20-96 8:03p
PC100K 688 1477211 05-20-96 8:04p
PC100K 689 1530121 05-20-96 8:04p
PC100K 690 547927 05-20-96 8:05p
PC100K 683 1116040 05-20-96 8:03p
PC100K 684 574824 05-20-96 8:03p
PC100K 691 972213 05-20-96 8:05p
PC100K 692 571081 05-20-96 8:05p
21 file(s) 15843129 bytes
168239104 bytes free
```

20 minutes to receive 15,843,129 bytes  
equals 792,156 bytes / minute,  
**47.529 megs / hour**  
**1.140 gigs / day**

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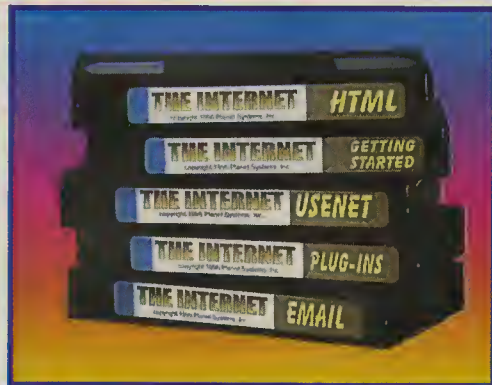
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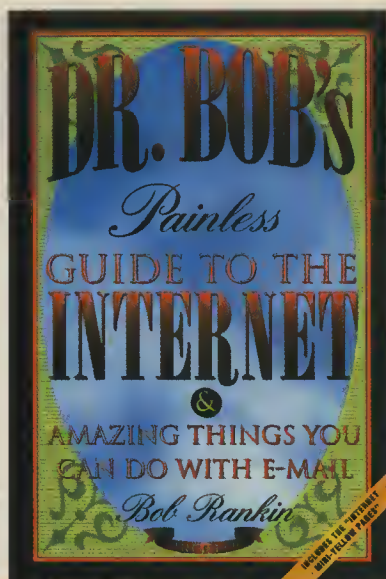
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for more details.







## BOOK BYTES by L. Detweiler

### EDITOR'S PICK:

#### *Dr. Bob's Painless Guide to the Internet*

by Robert "Dr. Bob" Rankin  
1996, No Starch Press  
122 pages, \$12.95  
ISBN #1-886411-09-3  
(415)284-9900  
<http://www.nostarch.com>

Yes, another unabashed plug for a *Boardwatch* writer's new book! But hey, they *are* the best, and that's all we write about.

This one is especially recommended to Internet Service Providers who want to a) cut down on phone calls from bewildered newbies, b) add value to their subscription packages and c) rack up more billable minutes with customers who have more to do and know how to do it right. Buy this book in mass quantities and make it required reading for new customers.

Don't be fooled by the modest page count and price - *Dr. Bob's Painless Guide* covers every aspect of Internet communication better than any of the six-pounders we see each month. It takes a consummate Master of the Wires to say all that needs to be said - and no more - in a style that is infectiously enthusiastic and reassuringly authoritative. Rankin eloquently demonstrates that getting on and using the Internet really *is* easy; it doesn't take 1,000 pages to explain how. Hit Bob's Web site at <http://csbh.mhv.net/~bobrankin> to see

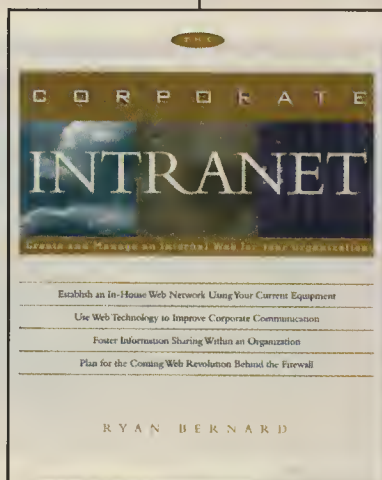
how he does it; sample chapters, the table of contents and an online ordering page are there.

In thirteen bite-sized chapters, Rankin lucidly covers the origins and architecture of the Internet; the equipment and software users need; SLIP/PPP vs. shell accounts; the myriad uses of e-mail, ftp, telnet and the World Wide Web; archie, veronica, finger, whois and other search tools; the cultures and etiquette of Usenet, mail lists and Internet Relay Chat. Each chapter is artfully illustrated with graphic screen captures and textual input/output listings. It is quite impossible to not "get it" or to get lost while reading this book. An equally comprehensive and comprehensible glossary of terms follows the main course.

Then comes dessert: *The Internet Mini-Yellow Pages*. Here again, Rankin's expertise saves the reader from an overwhelming barage of mostly useless data. Where other Internet directories indiscriminately list sites, Rankin devotes 16 solid-gold pages to the best of the most useful items: web sites for special and general interests, the good Doctor's preferred software for every application, and his top 10 recommendations for Internet service.

This book should be bundled with every Internet service startup kit. Volume discounts are available; contact the publisher or **mailto:bobrankin@mhv.net**.

—David Hakala,  
Editor at Fault



#### *The Corporate Intranet: Create and Manage an Internal Web for Your Organization*

By Ryan Bernard  
1996, John Wiley and Sons, Inc.  
395 pages, \$29.95  
ISBN #0-471-14929-2  
(800)225-5945  
<http://www.wiley.com/compbooks>

Bernard is a principal at a publishing and consulting firm in

Houston and has been involved in building intranet sites since before the term was coined. His experience with conservative Fortune 500 companies pervades the book, as he recounts many job-related anecdotes related to dealing with wary and controlling MIS managers.

Bernard's book is valuable precisely because it is not focused on the technical aspects of building an intranet, although it does cover this area well. Web surfers often find that some companies "get it" and many don't. Bernard has successfully captured and characterized the philosophy behind the web as "grass roots," "empowering users," "decentralized," etc. He is very good at highlighting why intranet technology is different from and often superior to existing information-

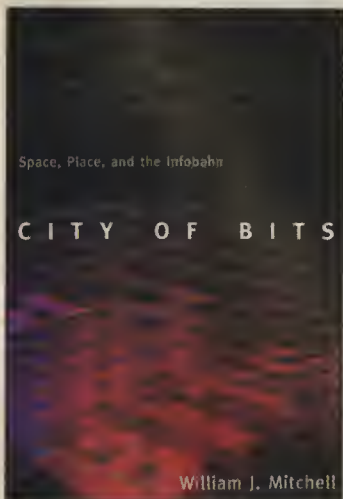


sharing paradigms used within companies. The emphasis is on the ends, not the means. He enthusiastically advocates the use of sophisticated tools that allow neophytes to do complex tasks such as create interactive CGI forms without programming knowledge.

Chapter Four contains four case studies, not of some dinky no-name companies, but of juggernauts Sun Microsystems Inc., Nortel, Chevron Petroleum, and Digital Equipment Corp. Bernard also highlights the growth and inside histories of these systems, with the kind of fascinating details that can really spark the reader's interest and understanding. He emphasizes the natural process by which intranets start out as informal and tiny and grow to become widely used and critical over time.

Other chapters consider all the general web basics such as creating home pages, HTML, editors, images, etc. from a business and intranet angle. The CGI chapters are written from a database-access point of view that will be especially valuable to companies. Bernard does dedicate a few pages to "how Java will change the world" but otherwise the coverage of specific technical aspects of the web is minimal. The volume will be quite comprehensible, perhaps even enlightening and inspiring, to jaded information managers. There are paragraphs where we could almost imagine light bulbs going off around the world as individual readers come to their unique epiphanies.

The timing of this book could not be better. We suspect that the technology targeted at intranets is increasingly becoming a very large, lucrative, and intensely competitive market. Bernard has done a fine job of mapping out future territory and giving a substantial account of why "intranet" is not just the new flavor-of-the-month vaporware buzzword but an extremely significant business trend. This will be an indispensable compilation for those in its audience.



***City of Bits:  
Space, Place, and  
the Infobahn***

By William J. Mitchell  
1995, Massachusetts  
Institute of Technology  
225 pages, \$20.00 hardcover  
[http://www-mitpress  
.mit.edu/City\\_of\\_Bits](http://www-mitpress.mit.edu/City_of_Bits)

*[Editor's note: yes, that's a hyphen after "www," not a dot.]*

"Familiarity breeds contempt."

American cultural revolutions go through various phases, the latter of which often consist of mocking and sarcasm of the entire episode by comedians. Cyberspace is on the verge of becoming fodder for this cynical pastime. A barrage of books now filling shelves attempt to analyze the implications of the information superhighway and the increasing ubiquity of electronic technology in daily life. Howard Rheingold, Bill Gates and Nicholas Negroponte are some of the more recognized names contributing to this increasingly cluttered and unoriginal genre. Some of the most entertaining and thoughtful perspectives

are from the idiosyncratic observations of people who are not closely associated with the field. The author of this book, Mitchell, is the Dean of the School of Architecture and Planning at MIT, and offers one such refreshingly unique perspective.

Mitchell's thesis explores the way that architecture epitomizes human activity since ancient times, and how this basic equation is being radically altered by the peculiar properties of cyberspace. Mitchell brilliantly conveys the way in which electronic technology fundamentally severs familiar relationships between human activity, building locations, and building constructions. Suddenly the whole concept of tying human activity to a geographic location within an architectural framework is obsolete, and Mitchell explores the ramifications in meticulously systematic and yet freeranging style.

Mitchell loves to pepper his prose with allusions to classic Greeks such as Aristotle and Hippodamos (the former crediting the latter with "the art of planning cities"). Mitchell at times gives an expert architect's "in a nutshell" description of architecture's trends and currents over two millennia, which is in itself intriguing to the layperson. But his insights into architecture's future relative to electronic technology are thoughtful, striking, and ultimately quite believable. Mitchell is interested in architectural movements that interrelate with shifts in society, such as the trend toward suburbanism in the 20th century and its impacts on building design and city layout. He apparently considers cyberspace to be at least as significant a social trend.

Mitchell's keynote chapter is "Recombinant Architecture," which shows several renowned architectural floorplans in basic categories such as libraries, theaters, universities, etc. that will be familiar to architectural students but not to most laymen (British Museum Library, Alte Pinakothek, Teatro alla Scala, a plan by Thomas Jefferson, etc.). Mitchell discusses their layout from the point of view of a modern architect who would have electronic technology at his disposal. His major point is that significant features of classic building designs are transformed by the availability of various electronic technologies, and the enlightened modern designer would make entirely new choices that may even be considered somewhat radical. At the extreme, some building roles are totally obviated, such as the vast trading floor of a stock exchange that could be reduced almost solely to electrons.

A sizable part of the book, about 50 pages, is dedicated to the footnotes, which are generally excellent surveys and pointers that readers can peruse for more detail on anything that Mitchell touches on. An index is also included. Mitchell does not seem to be conversant with some of the other key authors in his subject area (Rheingold is conspicuously absent) but perhaps that naiveté makes this a better book.

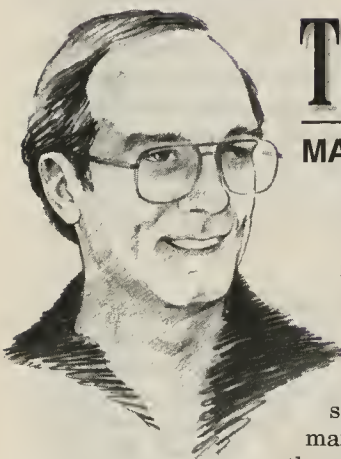
The "what cyberspace means" genre of books tend to be either Orwellian or Rockwellian; Mitchell's unequivocally falls into the latter category. It is in a style that will be appealing to fans of John Perry Barlow, for example (Mitchell references him repeatedly). Mitchell comes off as an enthusiastic advocate of technology for an interesting new set of reasons. ♦



## THIS MONTH'S LIST



Martial Arts Listkeeper Mike Weishaar (in white) trains with instructor Tim Jones



## THIS MONTH'S LIST

by David Hakala

### MARTIAL ARTS RESOURCES

The "martial" arts encompass far more than 50 ways to beat your lover. Self-discipline, harmony with nature and society, honor, good health and many other virtues form the basis for understanding and applying the more forceful manifestations of karate, judo and the myriad other fighting styles.

The many-faceted martial arts community is a global, place-less one, naturally suited for online communication. There are hundreds of related Web sites, newsgroups and mail lists. Fortunately, there are also people who maintain guides to all those URLs.

Michael Weishaar, a software tester for Motorola's Cellular Group, maintains one of the largest and best organized guides to martial arts resources, at <http://www.tezcat.com/~weishaar/martial>. Mike described for us how he got involved in martial arts and Web page design:

"I was born in the small town of Newton, Illinois, in 1969. I have been interested in the martial arts since I was about 13, when I started buying books and watching videotapes, and imitating what I saw. While it wasn't real instruction, it did build a better-than-nothing knowledge base for when I started classes in Goju-Ryu/Judo at a junior college, in 1988. In two years I received my 2nd brown belt. I then switched to a style that was based on Kempo and JuJutsu. I studied it for the next 3 years, during summers and other breaks away from school. I also attended seminars on Escrima, JuJutsu, Knife Fighting, and Iado. While in college, I took Aikido for 2 years, and also studied a little Tai Chi. After Graduating with a Bachelor's Degree in Computer Science from Southern

Illinois University at Carbondale in 1993, I continued with my training in Kempo. I then moved to Chicago to work for Motorola as a Software Engineer. Due to time constraints, I have yet to join another school, but I continue to train at home.

"I don't consider the martial arts to be a hobby. Some people train diligently, yet they can't grasp the real concepts of what the martial arts are about. It is not about showing off, winning trophies, belt rank, or getting into fights to prove who is the toughest. It is about respect, peace, learning, and development of the human spirit. The martial arts is a journey, not a destination. Some people realize this, some don't. Someone once said that a man can fish all his life without realizing that it is not fish that he is after. The martial arts are the same.

"One of the greatest things about the Internet is the ability to spread information to millions of people. There is a lot of information out there on the martial arts. I created this web page for my own personal use, because I needed to keep track of all of the good sites out there. It kind of evolved into this large list that I thought others would appreciate, so I made it available. Hopefully people will get some good use out of it."

Michael can be reached via e-mail at <mailto:weishaar@tezcat.com>, or for discussion on the news group <news:rec.martial-arts>.

*Due to space constraints we have included just a sampling of the 250-plus URLs on Mike's Martial Arts page.*

David Hakala first appeared in *Boardwatch* in March, 1989. From May of 1991 until he assumed the position of Editor at Fault at *BW* in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book *Hot Links* with Mark Eppley, CEO of Traveling Software, and penned his own book, *Modems Made Easy*, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at <mailto:david.hakala@boardwatch.com> or at (303)973-6038.



## REFERENCE PAGES

[http://meta.etanford.edu/~danny/ma\\_sites.html](http://meta.etanford.edu/~danny/ma_sites.html)  
<http://fly.hiwaay.net/~mcgee/martial.arts.html>  
<http://www.afternet.com/~lfowler/home2.html>  
<http://www.middlebury.edu/~jewan/martial.arts/ma.html>

## KARATE

<http://pages.prodigy.com/YERZ56A/tamag.htm>  
<http://www.math.utk.edu/~rrupp/akdw/>  
<http://www.kovar.com/>  
<http://www.cswnet.com/~treed/>  
<http://www.cf.ac.uk/uwcc/comp/tucker/dojo.html>  
[http://www.ici.net/cust\\_pages/uechi/uechi.htm](http://www.ici.net/cust_pages/uechi/uechi.htm)  
<http://www.ionet.net/~wmartin/index.html>  
<http://www.efn.org/~burnett/pskhome.htm>  
<http://www.to-de.com>  
<http://www.tracyskarate.com/>  
<http://www.intercom.net/user/cookie/karate.html>  
<http://duke.ueask.ca/~keele/doce/wadokai.html>  
<http://www.uechi-ryu.com/>  
<http://www.dillman.com/>  
<http://argus.appsci.unsw.edu.au/karate/>  
<http://www.emi.net/~iskkf/iskkf.html>  
<http://www.public.iastate.edu/~scc/karate/karate.homepage.html>  
<http://www.leland.stanford.edu/group/kenpo/>  
<http://www.mindspring.com/~bigred/>  
<http://tnc.www.com/~steve/kenpo/index.html>  
<http://buho.dpi.udc.cl/Shotokai-Budo/>  
<http://alethea.ukc.ac.uk/SportsFed/Karate/>  
<http://www.ieerv.net/pes/karate/karate.htm>  
<http://eniac.seas.upenn.edu/~vkalial/rkk.html>  
<http://www.worldgate.com/~artur/>  
<http://www.cs.cmu.edu:8001/afs/ce/usr/rahule/www/eka.html>  
<http://weber.u.washington.edu/~gosink/homepage.html>

## FILIPINO / INDONESIAN ARTS

<http://homepages.munich.netsurf.de/Thomas.Fiecher/serrada.htm>  
<http://www.geocities.com/Colosseum/1043/>  
<http://www.odyesee.net/~gurug/>  
[http://www.cs.pdx.edu/~tellner/bukti\\_negara.html](http://www.cs.pdx.edu/~tellner/bukti_negara.html)  
<http://www.cs.nmsu.edu/~wdawes/>  
<http://www.luc.edu/orgs/tee/>  
<http://www.serve.com/eolie/>  
<http://orion.oac.uci.edu/~tlau/eskrima/scea-hp.html>  
<http://www.ridgefield.sdr.slb.com:8080/Arnis/>

## JUDO

<http://www.iiynet.or.jp/kodokan/index.html>  
<http://www.ijf.org>  
<http://www.alp.cietron.nl/~avdhoret/>  
<http://www.judoweb.com/>  
<http://www.usa.net/~usja/>  
<http://www.worldaccess.nl/~mouse/judo.htm>  
<http://www.pub.utdallas.edu/~barrett/>  
<http://www.rain.org/~ssa/judo.htm>  
<http://www.ccn.cs.dal.ca/SportFit/JNS/jnsjudohome.html>  
<http://www.crl.com/~disrael>

## KUNG FU/CHINESE ARTS

[http://eueie.ust.hk/~ea\\_taiji/](http://eueie.ust.hk/~ea_taiji/)  
<http://www.worldkungfu.com/>  
<http://www.hom.net/~aegis/sifu/>  
<http://www.bway.net/~mformica/wueu/>  
<http://www.thunderhawk.com/wahlum/wlum0000.htm>  
<http://ourworld.compuserve.com/homepages/wingchun/>  
<http://www2.beet.com/~smmcnutt/hungar.html>  
<http://www.mantiskungfu.com/>  
<http://www.usere.fast.net/~lilung/>  
<http://ourworld.compuserve.com/homepage/twsjkd/>  
<http://cool.specialty.co.za/users/taichi/>  
<http://www.comland.com/~peterm/wt/awta.html>  
<http://www.wp.com/ShaoLin/>  
<http://infinity.dorsai.org/ymaa>  
<http://www.csua.berkeley.edu/~kanon/>  
<http://www.worldlink.ca/~sifu/>  
<http://www.worldgate.com/cybertek/wchun/>  
<http://www.best.com/~johnny/martial.html>  
<http://www.wfdesign.com/>  
<http://www.fdt.net/nawca/>  
<http://www-public.rz.uni-duesseldorf.de/~franza/taiji/>  
<http://rio.atlantic.net/~nawca/>  
<http://www.nsws.com/tai-chi/>

Danny Abramovitch's Martial Arts Page  
Mark McGee's Martial Arts Menu Page  
L. Fowler's Martial Arts Page  
Jay Swan's Martial Arts Page

Shorin-Ryu Sui-Ken  
Kang Duk Won Karate  
Kovar's Karate Center, Inc.  
Wolff Dojo  
Shotokan karate club in Cardiff  
The American Uechi-Ryu Forum  
American Kenpo Bu-Jutsu Karate Association  
Pendleton School of Karate in Oregon  
Okinawa Budo Kenkyujo - Okinawa Budo Research Centre  
Tracy's Kenpo Karate  
Isshin Ryu Karate  
Wado Kai Karate  
Uechi Ryu Karate Association online magazine  
George Dillman Karate International  
Kyokushin Karate  
International Shorin Ryu Kobudo  
Iowa Karate  
Stanford Kenpo Karate Club  
Atlanta Shotokan Karate Club  
Universal Kenpo Association  
Shotokai-Budo Karate in Chile  
Seidokan Karate at the University of Kent  
Okinawan / Uechi Ryu Karate Homepage  
Penn RyuKyu Kempo Page  
Kyokushinkai Karate  
Shotokan Karate of America  
Shotokan Karate of the Pacific Northwest

Tacosa Serrada Eskrima  
The Fighting Arts Page - Kali, Kuntao, and Pentjak Silat  
Kun Tao Silat  
Pukulan Pentjak Silat Bukti Negara  
William Dawes Filipino Martial Arts  
Tacosa Serrada Eskrima Club  
Solis Martial Arts, Inc.  
Southern California Eskrima Academy  
American Modern Arnis Associates

Kodokan Judo Institute  
International Judo Federation  
Judo/JuJitsu Page - Holland  
Elmer Fittery's Judo Information Page  
United States Judo Association  
Dutch Judo Page  
Dallas, Texas, Judo Page  
Neil Ohlenkamp's Judo Page  
Judo Nova Scotia  
Dan Isreal's Judo Page

Taichi Club Hkustsu  
Kun Tao page of Guy Savelli  
Shuai Chiao & Tai Chi Ch'uan Ch'ang Style  
Alan Lee's Chinese Kung Fu Wu Su Association  
Boston's Wah-Lum Kung Fu Athletic Association  
Wing Chun Kuen  
Hung Gar Kung Fu  
Praying Mantis Kung Fu  
Li Lung's Pai Lum Kung Fu and Tai Chi  
Tsu Wei Shu Martial Arts (Berlin, Germany)  
Tai Chi and Wushu page  
Austin Wing Tsun Academy  
Chinese Shao-Lin Kung Fu  
Yang's Martial Arts Association  
Doc-Fai Wong Martial Arts Center  
Modern Wing Chun of Jacques L. Patenaude  
Chiu Lau Wing Chun College  
John Yin's Chinese Arts Page  
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North American Wing Chun Association  
Alexander Franz's Tai Ji pages  
North American Wing Chun Association  
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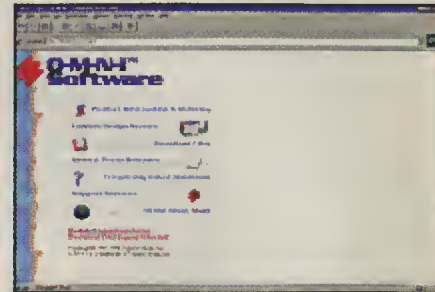
<http://www.cyberproducts.com>

**Cyber Products:** Instant Guest Book and Q&A Forum. No complicated CGI programming. Free 14 day trial. Just fill out the on-line registration form and add the link to your web page.



<http://www.planetc.com>

**Planet Systems, Inc:** Satellite Distribution of Information Products for Online Services, Skylink, Planet Connect, and Planet Connect TV. Includes UPI News and Pictures, Stock Market and Financial Data, Accu-Weather.



<http://www.o-m-n-i.com>

**O-M-N-I Internet/BBS Software** for Windows chosen as "Best New Product" at Intermedia/Internet Asia '96 show with new advanced Web and BBS technology



<http://www.murkworks.com>

**MurkWorks, Inc** Developers of BBSNet, IPDoor, and WorldSock. Powerful Internet access add-ons for most popular BBSs. Provide ANSI & RIP 'net clients, SLIP & PPP and painless Winsock access.



<http://www.cyclades.com>

**Cyclades Corporation** Designs, develops and markets high performance connectivity products such as multiport serial cards. Operating system supported: BSD/OS, Windows NT, Linux, SLO, Free BSD and many more.



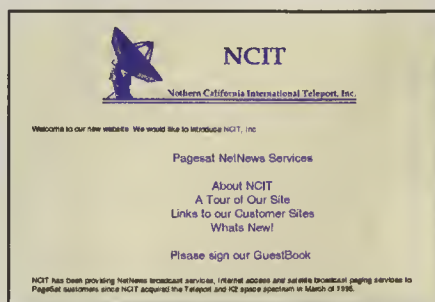
<http://www.visone.com>

**Visone Corvette, USA:** Your source for Corvette Sales, Financing and Leasing. Learn about Vettes, check our inventory, get online credit approval, request a FREE catalog, and take a fun quiz.



<http://www.intercom.com>

**Intercom Online's Wall Street Web Farm** puts your dedicated server on our hi speed (10 Mb) Internet connection. While your office may be in the boonies, your web server can be on the backbone for less than the cost of a T-1! Also, T-1, ISDN in NYC



<http://www.ncit.net>

**Northern California International Teleport:** Providers of Internet Access, Fidonet, E-Mail, high speed (115KBPS) satellite delivered NetNews and broadcast paging services to PageSat customers.



<http://www.kiss.com>

**An Online International Picture Personals:** Thousands of BEAUTIFUL and educated women from around the world wish to meet Americans for romance, friendship and marriage. 1,000 new photo ads each month





<http://mmb.com>

**MMB Development:** Developer of MMB TEAMate UNIX WEB BBS. TEAMate software now includes an integral WWW browser allowing you to mix HTML and other data within your TEAMate Bulletin Board.



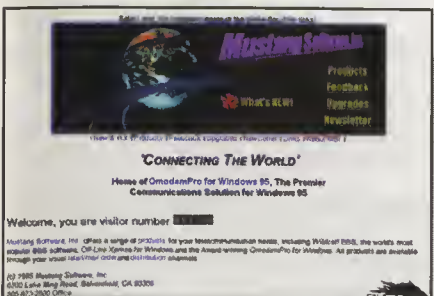
<http://www.comtrol.com>

**CONTROL:** A worldwide supplier of connectivity products including RocketPort and Hostess controllers for ISA and MicroChannel compatible microcomputers. Developer toolkits are also available for integration into Windows, DOS, and UNIX applications.



<http://www.marketplaza.com>

**Market Plaza:** We specialize in state-of-art web development and innovative on-line shopping including Mail Order Wizard, Tracy Otsuka, Bridge Kitchenware, Ever's Toy Store, and Cats, Cats & More Cats



<http://www.mustang.com>

**Mustang Software, Inc:** Producer of QmodemPro, the first communication package that delivers all the features and performance to get the most from the new Windows platform. It offers communication and Internet capabilities beyond the standard terminal software.



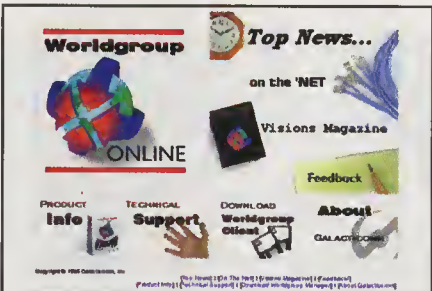
<http://38.244.81.1/ofc.htm>

**Online Financial Services:** Credit Card Processing for ISP's and BBSes, No Merchant Account Needed! No Application Fee, Low Rates, One Week Turnaround on your Money. OFS Approved software available for all BBS Platforms.



<http://www.rne.com>

**Rusty and Edie's BBS:** Everything in one place!! Windows file conferences, 75+gigs. We post over 200 megs of shareware and hot graphics each week! Dialup - 330-720-2620/Telnet - RNE.com



<http://www.gcomm.com>

**Galacticomm, Inc:** Since 1985, our corporate mission has been: "To do really cool things in the field of computerized communications and make a buck at it." When you see what we've packed into Worldgroup, we think you'll agree. Download Worldgroup Client software from our site.



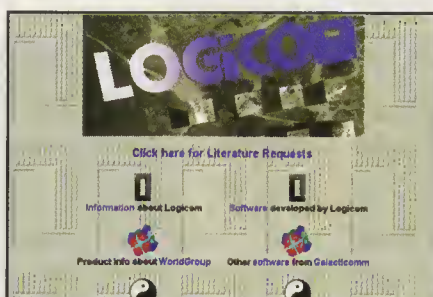
<http://www.hayes.com>

**Hayes Microcomputer Products, Inc:** Developer and manufacturer of PC, Macintosh, and PCMCIA modems, communications software for PCs, Windows, Macintosh computers, and high-speed serial ports to protect and enhance data transmissions.



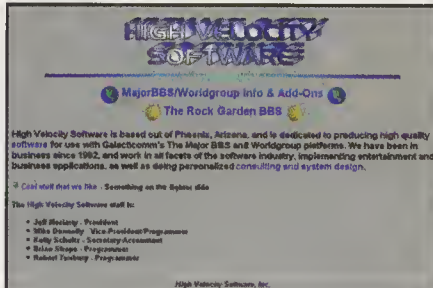
<http://www.esoft.com>

**eSoft, Inc:** We got our start 14 years ago with TBBS. Now the The Internet Protocol Adapter, or IPAD, is our primary product. The IPAD lets you build a full-function Internet presence without specialized expertise.



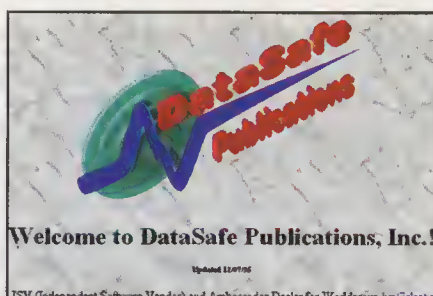
<http://www.logicom.com>

**Logicom, Inc:** Your Worldgroup Source and Galacticomm's largest Ambassador Reseller. Check our site for information on the Total Internet Turnkey System, that combines a Web Server, Independent Online Service, Internet Server, and Fax Broadcast Server all in one.



<http://www.hvs.com>

**High Velocity Software:** Dedicated to producing high quality software for use with Galacticomm's The Major BBS and Worldgroup platforms. Just give us a call and tell us what you are looking for. We provide everything from basic system design to custom applications.



<http://www.dsafepub.com>

**DataSafe Publications, Inc:** Efforts to customize The GaRBAge DuMP, our own 135-line nationwide BBS, lead us into becoming a software vendor and Ambassador dealer for The Major BBS and Worldgroup. We write our software and thoroughly test it all on our live system.





<http://www.absbank.com>

**American Banking Systems:** The first company ever to introduce software and services to accept check payments online, ABS is now the leader in online financial transaction processing. We feature Online Checks Direct, Credit Card Pay and our brand new Web Pay suite.



<http://www.excalbbs.com>

**Excalibur** is the original Windows Based BBS and now has full internet connectivity. All it takes is a simple internet connection and you can wire your BBS to the world. See why Windows Magazine named Excalibur BBS to its 1995 Win 100.



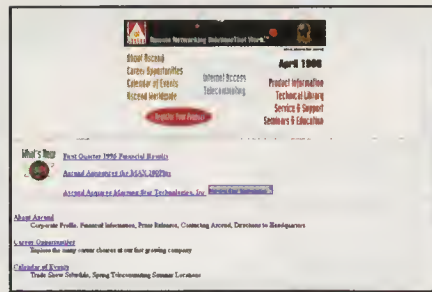
<http://www.livingston.com>

**Livingston:** Over 1,500 Internet Service Providers rely on Livingston products to connect millions of people to the Internet.



<http://www.fia.net>

**First Internet Franchise Corp:** Fast growing turnkey ISP franchise includes training, expanded profit center, integrated billing software, professional marketing materials, Intranet products, and Wildcat! Superstore. For new or existing ISP's!



<http://www.ascend.com>

**Ascend Communications, Inc.:** Leading, worldwide provider of remote networking solutions for corporate sites, remote offices and Internet Service Providers' PoPs for applications such as remote LAN and Internet access, SOHO connectivity, telecommuting, and video/multimedia access.



<http://nmol.com>

**ProDesign:** Specializing in professional business applications and custom software development for the Worldgroup and Major BBS platforms.



<http://www2.connectnet.com/~jmd/index.html>

**JMD Computer Merchandise:** Java Is Hot! We offer great Java logo merchandise. Connect to our website to order Java T-Shirt, Baseball Cap, Coffee Mug as well as many other items. Check us out!



<http://www.gtek.com>

**GTEK** is the leading manufacturer of High Speed Multiport Serial Boards. Our cards are used worldwide in Bulletin Boards, data acquisition systems. We have been in business for over 13 years providing quality products to our customers worldwide.



|                                      |            |
|--------------------------------------|------------|
| 3Com .....                           | 29         |
| AccuWeather, Inc. ....               | 54         |
| American Banking Systems. ....       | 48         |
| Arizona Mac Users .....              | 82         |
| Big Time Promotions. ....            | 82         |
| Boardwatch Subscription. ....        | 91         |
| Clear To Send Electronics, Inc. .... | 82         |
| Cyclades. ....                       | 35         |
| DataSafe Publications, Inc. ....     | 24, 94     |
| eSoft, Inc. ....                     | 6          |
| Excalibur Communications, Inc. ....  | 21         |
| Galacticomm, Inc. ....               | 2          |
| GTEK. ....                           | 61         |
| Hayes Microcomputer .....            | 15         |
| High Velocity Software. ....         | 69         |
| ISP DIRECTORY .....                  | 33         |
| John O'Connor Publishing. ....       | 42         |
| Key Information Services. ....       | 28         |
| Logicom, Inc. ....                   | 23, 79     |
| MMB Development .....                | 63         |
| Modern BBS/VS1. ....                 | 28         |
| Motorola .....                       | 55         |
| MurkWorks, Inc. ....                 | 67         |
| Mustang Software, Inc. ....          | 12, 17, 39 |
| NCIT. ....                           | 43         |
| Planet Systems, Inc. ....            | 83         |
| ProDesign, Inc. ....                 | 73         |
| Quarterdeck .....                    | 75         |
| Solunet, Inc. ....                   | 74         |
| Tessier Technologies .....           | 42         |
| US Robotics .....                    | 96         |
| Yokohama Telecom .....               | 45         |



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Excellent motivational tool for software development teams, marketers, and others who need to be reminded daily or hourly that they are just a step away from assimilation.

**LIMITED EDITION.** We still don't believe anyone would actually want one of these. So we've printed a scant 500 and when they're gone, they're gone for good.

# BILLGATUS OF BORG

VOLUME X, ISSUE 5 - BOARDWATCH MAGAZINE

[HTTP://WWW.BOARDWATCH.COM](http://www.boardwatch.com)

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# DVORAK ONLINE by John C. Dvorak

## THE FASCIST DREAM WON'T COME TRUE (I HOPE!)

I'm talking about the never-ending desire to somehow merge the TV and the computer in such a way that we have one tube that watches us day and night. I know that *we* are supposed to be watching *it*, but if the current convergence strategy actually happens it will indeed be watching us, that you can be assured. This time Intel and a slew of other companies looking for new markets for chips and software on riding this next crest of interest.

The original deal was to bring together a set-top box and the computer and a TV and the golden age of information and education and entertainment would be upon us. Edutainment, infotainment, infocation, eduinfotainment. Who knows what they were going to call it? The critics would probably call it crap and they'd be right. Luckily, it never came to fruition because it was an attempt to consolidate sources of information into one point. The opposite phenomenon is the true trend. In fact we are fragmenting, not converging. There will be more tubes in the home than ever before, not one big one.

The concept got attention a few years back when a secret study was shown to a few select advertisers. Marketing geniuses showed that with interactive TV it would take very little study to quickly determine a person's interests to the point where you could deliver an almost customized advertisement geared to the person's habits and taste. The most ludicrous outcome would be a commercial for some hamburger joint which showed a slimeball in line for a burger with the message — in a creepy pimpy accent — “Hey meeester. You like the little girls? You'll find them at the Ace Burger. The little kiddies love the greeeezy boigers that we serve to them with a leer and a smile. Join us, Meeester, for a boiger and fries. The playground is for adults too, hehehehe!”

It was big advertisers like McDonald's that liked what they saw in the study. Customizing ads would give them an edge over Burger King. While my silly example above might never be produced, you can be sure other ads, no less sinister, would be in the hopper if this set-top box nonsense ever got off the ground. Luckily the public, which cannot even manage to program the clock on the VCR, showed little interest. And the cable companies, which would have

to implement this whole deal, begged off. This left the drooling advertisers and the bonehead technologists who designed set-top boxes crying in their beer. (You DO know that Java was the quasi-OS for one of these devices, right?)

The problem is that bad ideas never die, especially when advertisers see some new way to sucker us into spending more money on useless junk. So now there's a slew of technologies that is trying to put the

Internet on the TV, integrated in such a way that when you're watching some favorite show its web page will be broadcast on a sideband. This way if you show some interest in a particular character or a product used in the show or whatever you can be targeted for customized advertising.

These guys should give up on this idea before there is a public backlash against advertising unlike anything the advertisers have ever seen. With ads going on the sides of buses and all over both stadiums and athletes, people are getting sick of the visual clutter. A bus painted to look like a Coke can is not really a pleasant sight. When the general public

finds out that advertisers are spying on them in their homes, all hell will break loose.

But advertisers are seriously in need of new outlets, and the web itself is still seen as an experiment, with prices for banners all over the place. The fact of the matter is that the web is a unique advertising opportunity since it allows the advertiser to actually capture readers and pull them into his site where he completely controls the sales pitch. You'd think that this proactive type of advertising would be a dream come true for advertisers. Only a few have realized it. Of course, the banner model itself may need some fine tuning.

I've been musing over the banner model for some time trying to determine if it will remain intact or be phased out for another vehicle. I notice that I'm reluctant to click on a banner for an advertiser but have been suckered into clicking on banners that say something like “Free Award Winning Poster — Click here” or “Chip triples modem speed” or some other teasers. No company name, just a teaser. The problem with this kind of banner is that if the person does not click on it the advertiser doesn't get that mindshare benefit of just getting his name in front of someone.

*“When the general public finds out that advertisers are spying on them in their homes, all hell will break loose.”*

In addition to his weekly syndicated radio call-in show, “Software/Hardtalk,” syndicated newspaper columns, magazine writing for *MacUser*, *PC Computing*, *DEC Professional*, *Information Technology*, and his featured “Inside Track” column in *PC Magazine*, Dvorak is the author of several best-selling books, including *Dvorak's Inside Track to DOS & PC Performance*, *Dvorak's Guide to PC Telecommunications*, and *Dvorak's Inside Track to the Mac*. John can be reached at mailto: [dvorak@aol.com](mailto:dvorak@aol.com)



Because of this, most advertisers emphasize the company name and minimize any message that would compel readers to actually go to the site. This is the basic problem with banners.

I believe a model that will work is the combination banner/free plug model that is not too dissimilar to the early TV hybrid model for advertising which was derived from radio. Radio still employs it. On radio, Rush Limbaugh will be chatting along ragging on Clinton, then suddenly go into a pitch for Cod Liver Oil without skipping a beat. He'll then transition back to the show. This is a common practice in radio. On TV in the early days a similar methodology was employed. Right in the middle of a show Jack Benny, for example, would ask one of his sidekicks for a cigarette and then go on and on about Lucky Strikes.

This concept on the web would be similar and on some British sites I've seen it employed. It would probably be irritating if not done smoothly. As I recall seeing it on this particular site, there was a banner and in the text of the index there was some dubious entry that was just a linked text that said something like "this is pretty cool, check it out" and it linked to the ad site. I didn't know what to think and was more bemused than annoyed. We all have to remember how easy it is to jump back a page with this technology. I didn't pay much attention to this (and hence forgot the site name) but I've always thought about it.

There is a thick line between advertising and editorial in the world of print. It's needed to retain credibility. If I plug some product in a column, readers have to be sure that it's my real opinion and not some "paid for" opinion. I believe, though, that links can easily be embedded within straight text. No opinions. In, for example the comment, "Many companies make a 200 Mhz Pentium-based machine. One such company is Gateway Computers" you can make Gateway Computers a hot link to their site as a paid advertisement; would that be acceptable? You could change it to Dell or Compaq or whomever. What difference does it make? You're not recommending the machine. You're just saying they make one and here's their link. There's a lot of ways of handling this hybrid advertising technique. And while it's still somewhat irritating to have paid for links to many people, this has got to be a better future than integrated TV/Internet advertising based on spying on the user which is what they are seriously considering. ♦

## Tracking the Elusive NorthWest Hamburger

In the Pacific Northwest, they make an unusual hamburger which is one topped with a fried egg. The running yolk in such a sandwich is similar to a crude Béarnaise sauce, which goes well with beef and is a tasty (if unhealthy) combo. I always assumed that this hamburger, which I've only found in Oregon and Washington, had some French origin. Now I've finally found this usage in the famous Waverly Root Italian cookbook entitled *The Best of Italian Cooking* (Grosset and Dunlap, NY 1974) — a book I'd recommend you collect.

### Hamburgers con uova all'occhio di bue

#### Ingredients:

2 pounds ground chuck  
8 eggs  
6 tbl. butter  
1/2 cup tomato sauce  
2 tbl. olive oil  
salt, pepper

Season meat with salt and pepper and make into 8 patties. Fry hamburgers in olive oil and butter, then put aside. Poach eggs in salted water and place one on each hamburger, then spoon over some tomato sauce and serve.

You can see where this dish can easily evolve into a hamburger sandwich with a similar flair. Other Italian recipes have hamburger served with ham, which is similar to a bacon burger. In the Pacific Northwest I've seen a bacon burger with the egg on it as well as a hamburger with ham and the egg.

What fascinates me about regional cooking is that there is as much of it as there is, considering the McDonald's mass-market phenomenon. While people move around the country to some extent, most people stay put in one area. And most of these regional dishes are only acceptable if you're raised with them. They are difficult to transplant elsewhere. Most regional cuisine pre-dates McDonald's and Subway and I believe it's dying out. Throughout the south there are regional variations on barbecue which I advise people to try at every opportunity because few new places open up and most that do are part of a chain with no regionality. They appeal to the lowest common denominator as determined by market research.

And when in the Pacific Northwest try one of these egg-burgers. One won't kill you. ♦

# Dvorak's Recipe Nook



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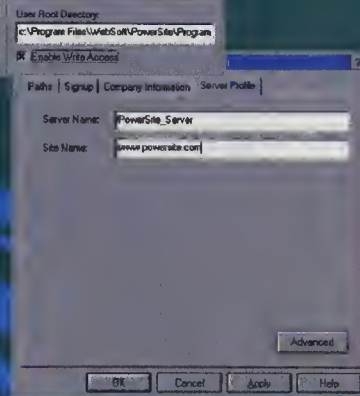
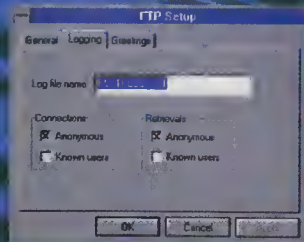
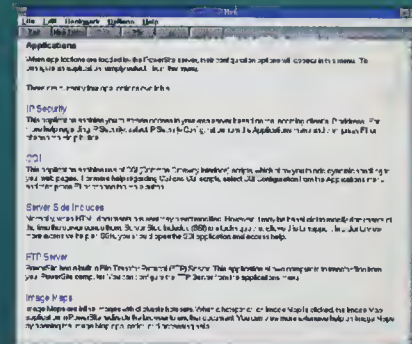
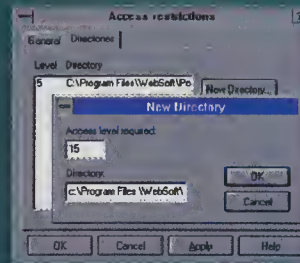
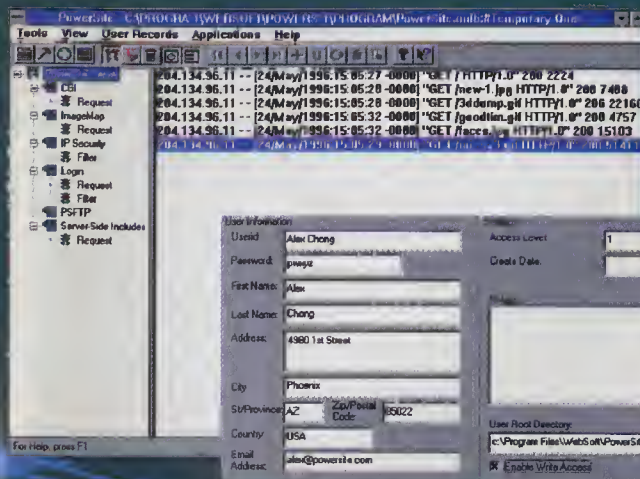
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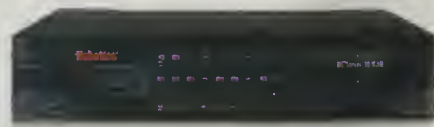
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